# Canadian Journal of PUBLIC HEALTH

*The National Journal of Preventive Medicine*

E ASSOCIATION - 50th YEAR - THE JOURNAL

Volume 50 AUGUST 1959 Number 8






*Program of Tenth Annual Meeting, Ontario Public Health Association*
*September 28, 29, 30*
*King Edward Sheraton Hotel, Toronto*


*Published Monthly by the*
CANADIAN PUBLIC HEALTH ASSOCIATION
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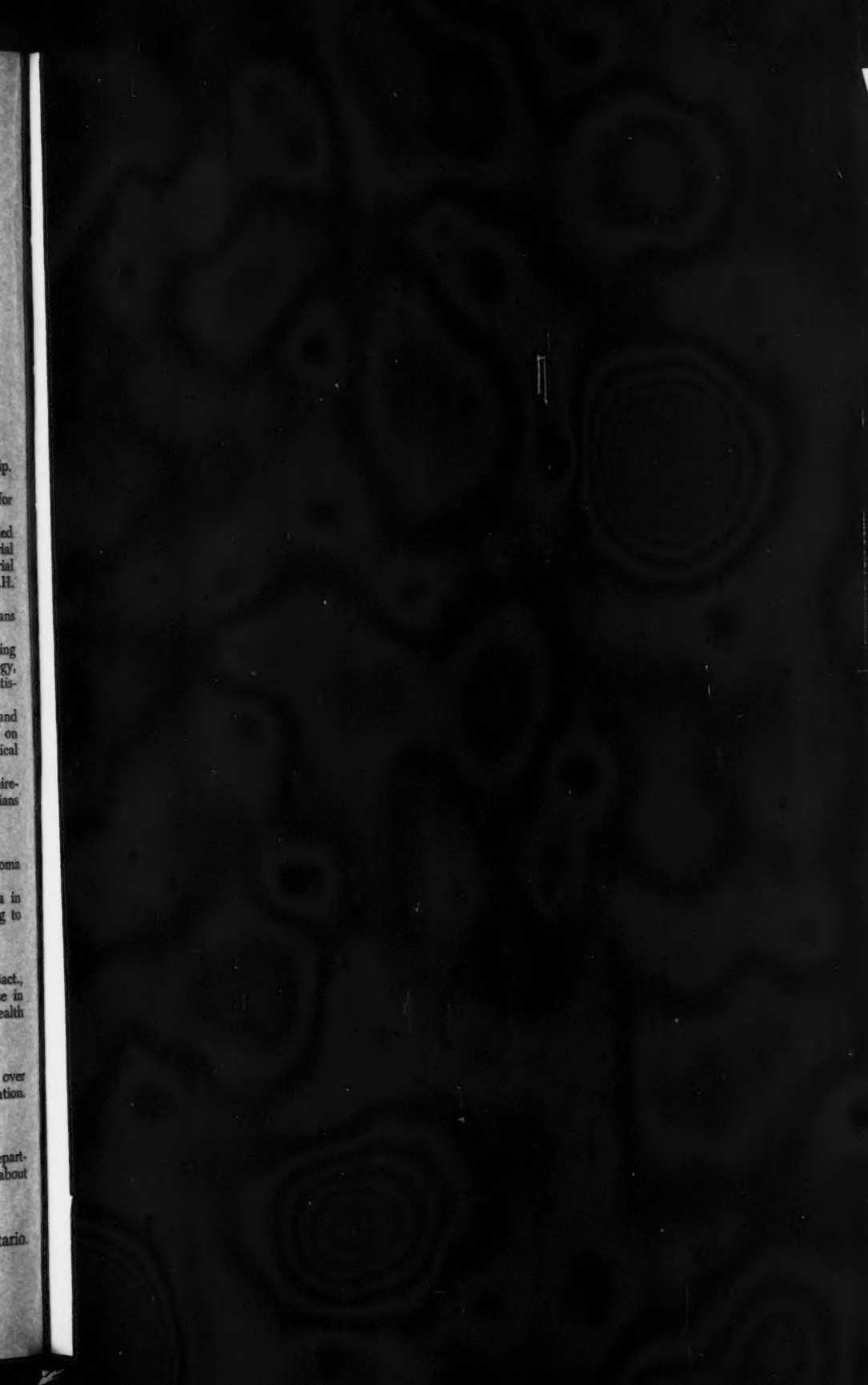

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The Canadian Journal of Public Health is published monthly by the Canadian Public Health Association. Editorial and business offices, 150 College Street, Toronto 5, Ontario. Subscription Rate $5.00 a year, payable in advance. Single copies 50 cents. Authorized as second-class mail, Post Office Department, Ottawa. 

*Canadian Journal of*
# PUBLIC HEALTH

VOLUME 50 AUGUST 1959 NUMBER 8

## The Challenge of Rabies[1]

G. A. EDGE,[2] D.V.M., D.V.P.H.

IT is well known that rabies is pathogenic for most, if not all, warm blooded animals. There is general recognition that the infection is primarily a disease of canines, that most human cases have arisen from a canine source, although there are exceptions, and that at times and in some regions of the world it occurs in epizootic form among various species of wild animals.

The experience on the North American continent shows that the disease has been enzootic in the United States for over 60 years, with peak years of more than 10,00 reported cases. Prior to 1950, 70 to 90% of the reported cases occurred in dogs. In most years wild animals accounted for less than 10% of the total. During the present decade the trend appears to be changing. Wild animal reservoirs of the infection have become more pronounced. Fox rabies extends down the Appalachian Range through Georgia and as far as Texas, with another belt along the Ohio Valley and the eastern part of the lower Mississippi River Valley. Skunk rabies extends from Minnesota to the border of Montana and southward to the Gulf of Mexico.

In Canada, prior to 1950, outbreaks in animals had been sporadic, of canine origin, and were brought under control by policies administered by the Canada Department of Agriculture, Health of Animals Division. These combined field investigation, laboratory diagnosis, quarantine and tie-up orders. Most of these sporadic outbreaks in Ontario were centered in the southern and south-western parts.

Coinciding with the increased interest and travel in the northernmost parts of Canada in recent years, came reports of what was termed arctic fox disease. On investigation by federal authorities, the disease was determined to be rabies and it had apparently existed in the Arctic regions of Canada for many

[1]Presented at the ninth annual meeting, Ontario Public Health Association, Toronto, Ont., September 29, 1958.

[2]Chief Public Health Veterinarian, Ontario Department of Health, Queen's Park, Toronto, Ont.

years. By the early 1950's rabies in foxes had started to spread southward and eastward across Canada. A new situation had arisen. The impact of this new development may be gauged from the following.

In the 45-year period to the end of 1952, less than 1,000 cases of rabies in animals had been reported for the whole of Canada. In the five-year period, 1953 to 1957 inclusive, approximately another 1,000 cases were reported. During the year 1958, Ontario alone reported almost 2,500 cases. Regardless of possible vagaries in reporting, it will be shown that the livestock owners of Ontario have good reason to be acutely aware of rabies.

*Course of the disease in Ontario*

Late in 1953 came reports of confirmed rabies in foxes in the district of Patricia. In 1954 the disease extended across to James Bay in a southeasterly direction, reaching into the district of Cochrane and as far as the Quebec border.

By the middle of 1955, the infection was well established on a line from Hearst to Cochrane and before the end of the year cases were reported from the districts of Temiskaming and Sudbury as well.

There was a wide dispersal in distribution in 1956. The infection ranged from Algoma through Sudbury and Nipissing to the Ottawa River and into Renfrew. At the same time there was a southeasterly movement into Quebec. Fingers of infection appeared in Manitoulin and Parry Sound, while isolated cases occurred over a wide area further south in the counties of Huron, Bruce, Victoria, Peterborough, Haliburton, Northumberland, Durham, Prince Edward, Lennox-Addington, Hastings, York, Wentworth and Wellington. This was a year when seeds of infection spread far and wide.

The first ten months of 1957, however, were of quiet and restricted activity. Confirmed cases in Parry Sound became more pronounced, but elsewhere it appeared as though the impetus was spent. Was the soil barren, the seed dead? November and December saw the beginning of the approaching storm. Muskoka became involved, then Prescott in the east, followed by Russell and Carleton, while a resurgence was taking place in Algoma, Manitoulin, Parry Sound and Renfrew. From 12 counties or districts in January 1958 reporting 70 cases, there has been a continuing increase throughout the year to a peak in December of 640 cases spread over 33 counties. Table I shows the principal areas of infection and indicates a progressive movement south, east and west from a district formed by Lake Simcoe, Georgian Bay and the Muskoka Lakes. The threatened thrust westward in the early part of the year from the eastern counties has so far failed to gain momentum.

A study of the distribution by groupings of animals—household, farm and wild—is of interest in relation to possible human exposure to the disease. Household pets—dogs and cats—accounted for 6.1% of the total and approximately 80% of the 85 proved rabid cats bit or scratched one or more persons. So far there has been no case of dog to dog transmission of the disease. Farm animals, principally cattle, made up 44.2% of all cases and it should be noted that there has been a rising trend as the disease has spread into more heavily populated livestock areas. Most human exposures have arisen from

TABLE I—REPORTED CASES OF RABIES IN ANIMALS IN ONTARIO BY COUNTY DURING 1958

| County or District | January to March | April to June | July to September | October to December | Total |
|---|---|---|---|---|---|
| Algoma | 18 | 6 | 3 | 1 | 28 |
| Brant | — | — | — | — | — |
| Bruce | — | — | 2 | 90 | 92 |
| Carleton | 7 | 22 | 20 | 16 | 65 |
| Cochrane | — | — | — | — | — |
| Dufferin | — | — | 28 | 149 | 177 |
| Dundas | — | — | 5 | 7 | 12 |
| Durham | — | 22 | 53 | 87 | 162 |
| Elgin | — | — | — | — | — |
| Essex | — | — | — | — | — |
| Frontenac | 2 | 3 | 4 | 3 | 12 |
| Glengarry | 6 | 30 | 17 | 9 | 62 |
| Grenville | — | 1 | 5 | 2 | 8 |
| Grey | — | 1 | 73 | 321 | 395 |
| Haldimand | — | — | — | — | — |
| Haliburton | — | 18 | 14 | 16 | 48 |
| Halton | — | — | — | 5 | 5 |
| Hastings | — | 5 | 5 | 15 | 25 |
| Huron | — | — | — | 37 | 37 |
| Kenora (excl. Patricia) | — | — | — | — | — |
| Kenora (Patricia Portion) | — | — | — | — | — |
| Kent | — | — | — | 1 | 1 |
| Lambton | — | — | — | — | — |
| Lanark | 11 | 9 | 4 | 18 | 42 |
| Leeds | — | 2 | 3 | — | 5 |
| Lennox and Addington | — | — | — | 4 | 4 |
| Lincoln | — | — | — | — | — |
| Manitoulin | 12 | 1 | 5 | 2 | 20 |
| Middlesex | — | — | — | 2 | 2 |
| Muskoka | 36 | 21 | 7 | 2 | 66 |
| Nipissing | 1 | — | — | — | 1 |
| Norfolk | — | — | — | 1 | 1 |
| Northumberland | 2 | — | 2 | 45 | 49 |
| Ontario | 14 | 19 | 35 | 48 | 116 |
| Oxford | — | — | — | 11 | 11 |
| Parry Sound | 16 | 3 | 5 | — | 24 |
| Peel | — | — | 1 | 43 | 44 |
| Perth | — | — | 1 | 12 | 13 |
| Peterborough | — | 1 | — | 32 | 33 |
| Prescott | 58 | 19 | 4 | 1 | 82 |
| Prince Edward | — | — | — | — | — |
| Rainy River | — | — | — | — | — |
| Renfrew | 16 | 10 | 3 | 9 | 38 |
| Russell | 7 | 9 | 10 | 4 | 30 |
| Simcoe | 51 | 38 | 94 | 156 | 339 |
| Stormont | 1 | 23 | 33 | 8 | 65 |
| Sudbury | — | — | — | 1 | 1 |
| Thunder Bay | — | — | — | — | — |
| Timiskaming | — | — | — | — | — |
| Victoria | 1 | 10 | 23 | 50 | 84 |
| Waterloo | — | 1 | 1 | 21 | 23 |
| Welland | — | — | — | 1 | 1 |
| Wellington | — | — | 4 | 206 | 210 |
| Wentworth | — | — | — | — | — |
| York | 1 | 2 | 18 | 30 | 51 |
| Total | 260 | 276 | 482 | 1467 | 2485 |

this grouping and in consequence rabies might be regarded as an occupational hazard to farmers and veterinarians. Wild animals, principally the red fox, accounted for 49.7% of the total yet most human exposures from this grouping resulted from curiosity or carelessness. The number of affected skunks appears to be slowly increasing and approximates 3% of all reported cases. To date, there have been no confirmed cases in small ground rodents, such as squirrels and chipmunks. Singularly, during recent winter months, several incidents of persons being bitten by bats have been reported. In none of these has rabies been proved.

*The challenge*

Rabies is enzootic in Ontario, in wild animals, principally the fox, and will probably continue to be so in the future. Since wild animals do not lend themselves to quarantine, vaccination or tie-up measures, other means to contain the infection and reduce its spread must be sought. The principal hazard to human health in the current situation arises from contact with household and farm animals which have become infected from wild animals. An informed public is essential for the prevention of human exposure to infection with the attendant anxiety, inconvenience and, at times, risk occasioned by the necessity for receiving anti-rabic vaccine.

The public health authority might well serve as a co-ordinator of the various authorities involved in the prevention of rabies. The problems associated with wild life populations, their control and reduction, belong primarily to official wild life authority. The protection of farm animals by the application of vaccination policies is essentially agricultural and veterinary. Measures to prevent needless exposure of household animals comes within the purview of municipal authority in association with regulatory and practising veterinarians. The task of informing the public through the various media properly belongs to public health authority, since the public health interest is paramount.

Effective tools have been developed, skilled hands are available and the challenge calls for action.

# Program Design and Evaluation: The Role of the Epidemiologist[1]

WM. ALLEN LONGSHORE,[2] JR., M.D.

WHAT is epidemiology? This question has been asked too many times and too many different answers have been given. The definition I have selected for use is one used by Dr. John Gordon (1). "Epidemiology is the study of disease behaviour and health characteristics, as manifested by groups of people; it is the means by which mass disease is recognized and appraised. It is a method of study, not a body of knowledge". It is sometimes referred to as the basic science of public health. It is basic in the sense that it is the diagnostic tool and hence the point of departure. Dr. Gordon suggests we think of epidemiology as the public health counterpart of diagnosis in clinical medicine. One of the main purposes of epidemiology is to provide the facts upon which to base a course of action.

Who is an epidemiologist? Obviously, an epidemiologist is a person trained to use and pursue the methods and techniques of epidemiology. Such a person, however, could by profession be a physician, nurse, statistician, engineer, or social worker; and, by job classification, could be a health officer, medical officer, bureau chief, field consultant, or research technician. When we speak of the "epidemiologist" in any public health setting, we usually are referring to the person who carries out the functions of an epidemiologist but who may not necessarily carry the title.

It is perhaps unnecessary to point out that the time honoured application of epidemiology in the study of epidemics is only a small segment of the field of interest now encompassed by the epidemiologic method. The base has been broadened and the limitation of the epidemiologist solely to the field of communicable diseases is no longer warranted or desirable. This fact has brought about the need for a re-examination of the scope of interest of epidemiology and a fresh assessment of its place in the practice of preventive medicine and public health.

*The Role of the Epidemiologist*

Health department programs should be dynamic, changing their emphasis as the problem situations fluctuate or shift into newer areas. In the area of planning new programs and evaluating the effectiveness of existing programs, the data and techniques of epidemiology can be used to good advantage.

[1]Presented at the joint meeting of the Canadian Public Health Association and the Western Branch, American Public Health Association, Vancouver, B.C., May 21, 1958 at a symposium entitled "Program Design and Evaluation as a Continuing Function of Health Departments".

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In order to plan new programs, knowledge is necessary of health problems that may be of future importance and of the techniques now being developed to control them. Estimates of the value of our current control operations are essential, as it is often the case that new progams and their acceptance, development, and implementation will depend on the discarding of outmoded or unproductive activities. If public health is to cope successfully with these newly identified and rapidly emerging problem areas (smog, radiation fallout), their health implications and dimensions must be first determined by thorough and sometimes time-consuming and expensive epidemiologic observations and analysis.

The epidemiologist has an important role to play in the solving of a community health problem, whether it is due to acute communicable diseases, diabetes, cancer, accidents, mental illness, etc. The solving operation is a complex and systematic operation progressing through distinct steps. A satisfactory conclusion depends upon pooling of skills and scientific disciplines (both biologic and social sciences) and the efforts of persons of divergent interests, some medical and some nonmedical. Epidemiology has a part in the procedure and an important function—that of diagnosis.

Gordon (2) has listed seven steps to be completed in solving a community health problem and whether it be home safety, cancer, or infectious hepatitis they are as follows:

1. Provide precise definition of the existing situation—its nature and size. This is essentially a team effort of the practising physician, epidemiologist, statistician, sociologist and others.
2. Determine whether or not this is a problem of community proportions and measure the extent and importance of the problem to the community.
3. Determine the forces (multiple factors) that brought the situation into being and presumably determine its course. These causative factors of community disease can usually be assigned to one of three categories, as being related to the host, agent, or environment. These three, in turn, involve the proportion of the population affected and unaffected, the time relationships involved, and geographic distribution.
4. Formulate principles for a control program.
5. Decide on tactical action to be taken.
6. Analyze accomplishments and determine the extent of progress.
7. Provide the administrator with data by which to judge the efficiency of the technical methods employed.

The epidemiologist is a valued member of the team in each of these steps and the leader of the team in steps 1, 2, 3, 6, and 7. The understanding of disease patterns as they affect masses of people requires epidemiologic data to describe the community, and examination of community-wide factors such as a knowledge of the people, their health problems, their protective resources, and includes local environment, personal habits, past history, individual traits,

etc. Mattison (3) likes to stress the importance of this concept which he labels "community anatomy".

The role of the epidemiologist in these various steps seems self-evident. He must help select the factors to be included in the investigation, clarify their relationship to the disease process, their recognizability, their specificness and their appropriateness. All of these are problems posed for the epidemiologist and it is his role, in conjunction with the other technical specialties, to propose areas of study and questioning which will bring out the possible causative factors and help delineate an approach to the problem at hand.

*Levels of Operation*

In many state health departments in the United States there are units or bureaus labeled "Bureau of Epidemiology", but, in spite of the name, they are in reality solely a control agency and do little or no epidemiology *per se*. That which is done is usually in the narrow prescribed area of communicable disease. In some state health departments there are epidemiologic activities attached to the laboratories. Again, this activity is in the restricted and narrowing field of communicable disease investigation and control. There are very few state health departments, to my knowledge, in which the "epidemiologist" acts solely and primarily as an epidemiologist and is removed from administrative duties and responsibilities. In major program areas, particularly in large health departments, the separation of the epidemiologic approach from the administrative approach is desirable mainly from the standpoint of the work load. The administrator usually has insufficient time to devote adequate attention to both aspects and consequently one or the other, and in most instances both, aspects suffer. There are some trends in this direction, for example, the establishment in early 1957 of a chronic disease epidemiologic center in the California State Health Department's Bureau of Chronic Disease. In this center it is the primary duty of the epidemiologists employed to sit and think of epidemiologic studies in this field of endeavour. This ideal setting for the employment of the epidemiologic method is financed by a grant from the Rockefeller Foundation. The objectives of such a center are, among others, "to provide consultation, direction, and other assistance in developing epidemiologic studies; to assume responsibility for methodological review and continuing evaluation of the several epidemiological studies under way" (4).

What approach have these epidemiological investigations in chronic disease taken? Usually four steps are involved: (a) exploration and sorting of hypothesis in respect to groups under study, (b) confirmation of the hypothesis, (c) determination of specific environmental agent, and (d) development of protective measures. Such investigations require careful design, long-term observation, sizeable population group, and adequate medical-statistical apparatus. Some specific examples of the investigational areas in the chronic disease epidemiologic program in California are: Environmental factors in cancer of the uterine cervix, Occupational and air pollution factors in lung cancer, Occupational causation of heart disease, California health survey, Cardiovascular epidemiology, Health effects of air pollution, and Identification factors contributing to the cause of alcoholism.

This activity at the state level has been demonstrating the role that can be played by a state health department in this vital area of health progress. Study findings may assist in the reorientation or redirection of state public health services in an attempt to keep pace with changes in the leading causes of morbidity and mortality.

Another approach to epidemiologic investigations of chronic disease, being seriously considered by this unit, is the establishment of a human population laboratory. By concentrating investigations in one well-defined, thoroughly studied area, the work can be done with economy of time and funds. The emphasis will be placed on the environment of the affected person and on his characteristics. It is expected that such epidemiologic research will play a part in supplying and testing hypotheses as well as offering productive leads for laboratory and clinical research by establishing more clearly the associations between various conditions.

Investigation possibilities in such a selected population are almost unlimited. The Bureau of Chronic Disease has specifically outlined five areas of immediate and pressing concern to be studied over a five-year period. Briefly stated, they are: (1) epidemiology of two cancer sites, breast and cervix, (2) coronary heart disease, (3) glaucoma, (4) aging, and (5) alcoholism. With such a study population, it might be possible to investigate disease victims, their families and other social groups to which they belong, with the possibility of identifying multiple causative factors in these chronic conditions.

In selecting an area for the study, the following factors must be met: a compact political unit with a population of about a million—enough for valid statistical analysis but not unwieldy in size; an urban-suburban population, like most of California; a population sufficiently heterogeneous with respect to occupation, socio-economic class, race, and having well developed medical, hospital, public health and welfare services.

At the local health department level, unless the unit is of considerable size, there is usually no specific individual or position designated as "epidemiologist". Thus, the methods of epidemiology, if they are to be utilized at all, must be supplied by the health officer or the public health nurse, by the public health analyst, or by the medical officer in communicable diseases or venereal disease control. It should again be stressed here that the epidemiologic method is not the sole prerogative of the so-called "epidemiologist", but can be effectively applied by many disciplines. In fact, an attempt to spread the gospel of the epidemiologic method was undertaken in California (1956) and in several other states in co-operation with the Communicable Disease Center (USPHS), by holding three institutes of a week's duration entitled "Principles of Epidemiology". The purpose of the institutes was stated as follows: "These institutes have been planned and developed to provide health department personnel with an understanding of the principles of epidemiology and their application to communicable disease control and related problems. The importance of close co-operation and effective communication between the various disciplines will be stressed." Subject matter included communicable diseases, accident prevention, cold

injury, heart disease, etc. Physicians, nurses, sanitarians, veterinarians, laboratory and statistical personnel came to these institutes and it is hoped they absorbed some of the epidemiologic thinking so that it could be applied in their disciplines and in their areas of activity. Also in attendance was the officially labeled "epidemiologist". The true value of these epidemiology institutes may never be known, but at least an organized exposure to epidemiologic techniques was carried out on some 275 participants in the three sessions.

In California, the State Health Department, with the approval and assistance of the California Conference of Local Health Officers, is currently revising its morbidity reporting procedure in a deliberate attempt to transfer responsibility for epidemiologic analysis of current disease data back to the local health department, where it so rightly belongs. It is hoped that such a manoeuvre will stimulate more epidemiologic thinking at the local level and result in some interpretation of the data and not merely counts, numbers, and totals. The morbidity clerk usually sees them as unrelated numbers, the epidemiologist relates them to specific factors, picks up the problems and analyzes possible causative factors. Only time will tell how successful this approach will be.

Another program approach that is bound to stimulate epidemiologic thinking is the use of Special Projects Grants allocated through a State Advisory Committee to local health departments for projects in the areas of occupational health, maternal and child health, chronic disease and aging. This program began in 1957 and makes funds available for epidemiologic study, demonstration projects, or field research in the above fields, thus encouraging local health departments in these areas of activity.

Another indication that the epidemiologic method is considered important and useful in public health agencies today is the fact that a course in epidemiology is now considered a core area for the Master of Public Health degree. The effort is to have all newly qualified persons, regardless of their specialty, familiar with the methods and techniques of epidemiology. Thus, when participating in program design and evaluation, the epidemiologic method will be able to make its important contribution through each individual involved and not require the special presence of an epidemiologist.

Throughout this discussion I have deliberately equated the role of the epidemiologist with use of the epidemiologic method. Thus, I have been discussing the possible role of many disciplines if they are equipped to employ epidemiologic techniques.

*Comparative Roles*

The epidemiologist might be called the "dreamer" of the team, picking out investigative opportunities, thinking up ideal studies, looking for adequate controls, single variables, posing provocative questions. In turn, the statistician is looked upon as a practical planner, one who might determine the likelihood of a "payoff", foretelling the validity or possible validity of the proposed activity. The statistician is highly useful, even though sometimes most discouraging in his pronouncements regarding the validity and comparability

of data. He is an integral part of the team in the data collection and analysis and, by all means, should play an important role at the earliest stage in the development of the studies. His data must be interpreted with caution, however, for as Dr. Hugh Paul (5): says: "We must have the greatest sympathy for the statistician who was drowned crossing a stream of an average depth of two feet".

The administrator in many instances can be looked upon as both judge and jury because it is his responsibility to determine the feasibility, the economics, the strategy, the priorities, the cost, the availability of personnel, the facilities, and supplies. This may mean that the planning, thinking, and preparation, proposed by the epidemiologist and the statistician, cannot come to fruition. Administrators, undoubtedly, would like to have readily available all of the epidemiologic information regarding all of the current and potential health problems, but I think it is only realistic to acknowledge the fact that in many instances administrative decision will be necessary without this complete data and in many instances it will not be economical or feasible to obtain the necessary data within their own unit. One way of expressing the relationship of epidemiology and administration is to say that epidemiology and public health administration act for populations as do diagnosis and treatment in disease of the individual.

Health departments are uniquely adaptable to epidemiologic investigating due to their long experience with field studies in communicable disease. They have access to population groups, (clinics, hospitals, industries, schools, etc.), are already involved in vital record collection which is often invaluable for epidemiologic investigation, and have already developed services in statistics, in nutrition, in medical social work, etc., and lastly, they will be the organization called upon to carry out whatever control measures are determined to be effective.

In closing, I quote again from Gordon (1): "Modern epidemiology recognizes a field of usefulness that includes all mass disease and mass injury of human populations. It is the diagnostic discipline of mass disease. As such, it is an integral part of the public health procedure, practised in principle by all health workers. No health department—national, county, or local—can effectively prevent or control disease without knowledge of when and under what conditions it is occurring". Finally, I would like to point out that epidemiology, in contrast to most specialties, is progressing by widening its horizons when most of the others are narrowing theirs by increased specialization. Thus, I would predict that there will be jobs in many fields for many years to come for those trained in the principles and techniques of epidemiology, regardless of their professional discipline. In short, I am suggesting that the important thing is not the label of "epidemiologist" but it is the utilization of the method of epidemiology wherever, and whenever it will be useful.

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# The Department of National Health and Welfare[1]

G. D. W. CAMERON[2], M.D., D.P.H., F.R.C.P.(Lond.), LL.D.

CANADA, the third largest country in the world, covers nearly half a continent and includes the large northern archipelago which extends almost to the North Pole. The nation's 17,000,000 people live in ten provinces and two northern territories. The total area, more than 3½ million square miles, equals that of Europe, yet all regions of dense population lie within 200 miles of the southern border and two out of three Canadians live in urban centers. Before World War II about 60% of the population lived in rural areas.

Advances in medical science and the development of health services have contributed to a pronounced improvement in the health of Canadians during recent years. In the period 1931–1951, life expectancy at birth for males rose from 60 to 66 years and, for females, from 62 to 71 years. The average age at death in the period 1926–1956 advanced, for males, from 40 to 58 years, and, for females, from 42 to 61 years. In the latter period, the birth rate per 1,000 population rose from 24.7 to 28, while the infant mortality rate fell from 102 to 32. The proportion of births taking place in hospital rose from 17.8% to 88.4%. The maternal mortality rate dropped from 5.7 to 0.6. The general death rate was 8.2.

Federal government estimates of health and welfare expenditure for 1959–60 total $1,400,561,345. This is the largest budget for any government department except National Defence. The largest expenditures on health are for hospital insurance ($160 million); National Health Grants ($46 million); Indian and Northern Health Services ($23,829,552). For welfare, the sum of $577,600,000 is budgeted for Old Age Security ($55 a month to everyone over 70 years of age); $495 million for Family Allowances ($6 to $10 a month for every child under 16); and about $85 million for Old Age Assistance, Blind Persons' Allowances, Disabled Persons' Allowances and Unemployment Assistance.

## HISTORICAL HIGHLIGHTS

1832–Grosse Ile, Quebec, was established by Imperial authorities as a quarantine station under military control. Responsibility was assumed by Canada in 1855.

1844–Lazaretto for care of leprosy patients was opened on Sheldrake Island, New Brunswick; transferred to mainland at Tracadie in 1849; operated by the Sisters of Hôtel Dieu, Montreal; became the responsibility of the Dominion government in 1880.

[1]One of a series presenting the development and organization of public health in each of the provinces and the Department of National Health and Welfare of Canada.

[2]Deputy Minister of National Health, Ottawa, Canada.

1866—Dr. Frederick Montizambert became medical superintendent of Grosse Ile quarantine station. He had been assistant superintendent since graduation from Edinburgh in 1864.

1867—British North America Act united the provinces of Nova Scotia and New Brunswick with Upper and Lower Canada, now Ontario and Quebec. By the Act, maritime quarantine and marine hospitals for sick and disabled seamen, the census and vital statistics were assigned to the Dominion government. Hospitals, asylums and charitable institutions continued to be the responsibility of the provinces.

1869—Dr. Montizambert was named medical superintendent of the St. Lawrence Quarantine Service.

1874—The world's first food adulteration act was passed, under which collectors for the Department of Inland Revenue procured samples of foods and drugs and sent them to the Commission on Conservation for analysis.

1884—The Adulteration Act was revised and a chief analyst, W. H. Sugden Evans, was appointed.

1894—Dr. Montizambert was named general superintendent of quarantine.

1899—Dr. Montizambert was appointed director general of public health and sanitary adviser to the Dominion government.

The Public Works Health Act was passed relating to the supervision of the health and safety of Public Works employees.

1906—Leprosy Act assigned responsibility for treatment to the federal government.

1907—The Proprietary or Patent Medicine Act was passed, administered by the Department of Trade and Commerce, which required registration of all secret-formula, non-pharmacopoeial preparations.

1908—The Opium and Narcotic Drugs Act was passed.

1914—World War I (1914–1918).

1918—The Food and Drug Laboratory was transferred from the Department of Inland Revenue to Trade and Commerce and the Proprietary or Patent Medicine Act from Trade and Commerce to Inland Revenue.

The Quarantine Service was transferred from the Department of Agriculture to the Department of Immigration and Colonization.

1919—Department of Health (Canada) was established, bringing together health services from a number of federal departments. Hon. N. W. Rowell was Minister and Dr. J. A. Amyot, C.M.G., Deputy Minister. Medical Services were transferred from Immigration and Colonization, Food and Drug Laboratory from Trade and Commerce; Marine Hospital Service from Marine and Fisheries; Proprietary and Patent Medicines Service from Inland Revenue, and housing from the Administration of the Housing Act. A publicity and statistics division was created and commencement of a library was made with the transfer of 2,000 books from the Commission on Conservation. A division of venereal disease control was organized and provision of $200,000 annually was made by Parliament for assistance to the provinces in venereal disease control.

A child welfare division was created. Provision was made for a laboratory of hygiene, including research. An advisory body, the Dominion Council of Health, was provided.

1920—Hon. J. A. Calder became Minister of the Department of Health.
Dr. Helen McMurchy was appointed chief of the child welfare division.
Adulteration Act of 1906 was repealed and replaced by the Food and Drugs Act.
Dr. Montizambert retired as director general of public health after 54 years of quarantine service.
Opium and narcotic drugs control was transferred to the Department of Health from Trade and Commerce, forming a new division.

1921—Dr. N. MacLeod Harris was appointed chief, laboratory of hygiene.
Publicity and statistics service was discontinued.

1922—The Hon. B. S. Béland became Minister of Health.

1923—H. M. Lancaster, M.A.Sc. was appointed chief dominion analyst, serving from 1923 to 1945.
Public health engineering division was established, also a division of hospitals and sanitation and a division for the control of pollution of inland waters.

1924—Housing division was discontinued.

1925—A reciprocal agreement with the U.S.A. provided for the certification of all export shipments of shellfish.

1926—Hon. J. C. Elliott, Hon. J. Manion and Hon. E. E. Paquet served successively as ministers of health during part of this year and were succeeded by Dr. J. H. King.

1927—The Old Age Pensions Act provided pensions for needy old people.
Dr. E. L. Stone was appointed superintendent of medical services in the Department of Indian Affairs.
Extension of medical immigration services to provide departmental medical officers in Europe.

1928—Publication by Dr. J. J. Heagerty of "Four Centuries of Medical History".

1929—The Department of National Health became the Department of Pensions and National Health with the discontinuance of the Department of Soldiers' Civil Re-establishment. Hon. Dr. J. H. King continued as minister of the new department with Dr. J. A. Amyot, C.M.G., deputy minister and Dr. J. J. Heagerty as chief executive assistant of National Health.

1930—Hon. Murray MacLaren became Minister of Pensions and National Health.
G. H. Ferguson, M.A.Sc., was appointed chief, public health engineering division, to which the divisions of hospitals and sanitation and pollution of inland waters had been added.

1932—Dr. R. E. Wodehouse was appointed Deputy Minister.
The venereal disease control division was discontinued.

1933—Quarantine, immigration medical and sick mariners services were united into one division under Dr. C. P. Brown.

1934—The child welfare division was discontinued on the retirement of Dr. Helen McMurchy.

Hon. Dr. Donald Sutherland became Minister of Pensions and National Health.

The medical investigation division for medical examinations in the civil service was established under Dr. F. S. Parney.

1935—Hon. Chas. G. Power became Minister of Pensions and National Health.

Dominion Housing Act was passed.

1937—Division of epidemiology was established under Dr. R. B. Jenkins, but was discontinued in 1939 on the outbreak of World War II.

Canadian Council on Nutrition was formed as an advisory body to the department.

The division of child and maternal hygiene was re-established with Dr. Ernest Couture as chief.

The Old Age Pensions Act was amended to provide pensions for the needy blind.

1938—The divisions of industrial hygiene, under Dr. F. S. Parney, and publicity and health education, under F. W. Rowse, were established.

"Radio pratique" in maritime quarantine services permitted entering of port by radio advice.

1939—National advisory committees to the industrial hygiene division and to the National Council on Nutrition were appointed.

1939—Hon. Ian Mackenzie became Minister of Pensions and National Health.

Dr. G. D. W. Cameron succeeded Dr. N. McLeod Harris as director, Laboratory of Hygiene.

World War II 1939–1945.

1941—Medical supervision of pensions for civilian blind was taken over by the medical investigation division.

Nutrition division was established with Dr. L. B. Pett as chief.

Provision of dried human blood serum for treatment of wounded soldiers.

1942—An advisory committee on health insurance was formed with Dr. J. J. Heagerty as chairman.

1943—Venereal disease control division was established.

National Physical Fitness Act was proclaimed, providing for a national council on physical fitness and federal grants to provinces.

1944—The National Council on Physical Fitness was established, with Major Ian Eisenhardt as chairman and national director of physical fitness.

Department of National Health and Welfare was formed with Hon. Brooke Claxton, Minister, Dr. Brock Chisholm, Deputy Minister of Health, and Dr. G. F. Davidson, Deputy Minister of Welfare.

Family Allowances Act was passed.

Report of the Advisory Committee on Health Insurance was presented to the Special Parliamentary Committee on Social Security which reported to the House of Commons, approving a draft health insurance bill.

Research division was established to conduct socio-economic research in health and welfare.

Medical investigation division was expanded into the Civil Service Health Division with Dr. R. G. Ratz as chief.

Blindness control division was established, with Dr. F. S. Burke as chief.

1945—An interdepartmental working committee on health insurance prepared "Health Reference Book of the Dominion-Provincial Conferences on Reconstruction" and "Proposals of the Government of Canada". Subsequently, a dominion-provincial conference on health insurance failed to reach agreement on financial relations between the federal and provincial governments.

Expansion of the services of the Department of National Health and Welfare included: directorates of health insurance studies and Indian health services (transferred from Department of Mines and Resources); divisions of dental health, hospital design, mental health, tuberculosis control, blindness control and advertising and labels. Division of information services replaced publicity and health education division. Old age pensions division, including pensions for the blind, was transferred from the Department of Finance to the Welfare Branch. Physical fitness division was transferred from the Health Branch to the Welfare Branch.

1946—The Hon. Paul Martin became Minister of National Health and Welfare and Dr. G. D. W. Cameron, Deputy Minister.

Divisions of food and drugs, advertising and labels and proprietary or patent medicine were merged into the Food and Drug Directorate with Dr. C. A. Morrell as director.

1947—Division of epidemiology was re-established.

The National Cancer Institute of Canada was formed following conferences initiated by the Department of National Health and Welfare and the King George V Silver Jubilee Fund of $450,000 was transferred to the Institute.

1948—The National Health Grants Program was inaugurated, under which an initial amount of $30 million annually was made available to the provincial departments of health for new or extended health services.

Dr. F. W. Jackson was appointed head of the directorate of health insurance.

1950—Canadian Sickness Survey studied incidence of sickness in 10,000 families during the year in co-operation with the provinces.

1952—Old Age Pensions Act was replaced by the Blind Persons Act, the Old Age Security Act and the Old Age Assistance Act.

Civil defence was transferred from the Department of National Defence to the Department of National Health and Welfare.

Provinces completed surveys of health facilities and services as part of maternal health grants program.

1953—Food and Drugs Act consolidated many amendments and regulations.

National Health Grants Program made provision for grants for medical rehabilitation, maternal and child hygiene and for laboratory and radiological services.

1954—New virus research laboratory building opened in Ottawa.

Medical rehabilitation and advisory services were established.

Field trials of Salk poliomyelitis vaccine were conducted in Canada in which more than 900,000 children received vaccine.

1955—Salk poliomyelitis vaccine was released for distribution in Canada and provision made for free distribution by the federal and provincial governments.

Northern Health Services established and new directorate designated Indian and Northern Health Services.

1956—New food and drugs laboratory was opened in Ottawa.

New federal-provincial unemployment assistance program was introduced.

1957—The Hon. J. Waldo Monteith became Minister of National Health and Welfare.

Hospital Insurance and Diagnostic Services Act was passed under which the department was enabled to enter into agreements with the provinces for the provision of hospital and diagnostic services.

Increased benefits under Family Allowances Act and Old Age Security Acts.

New laboratory of hygiene building was opened in Ottawa adjacent to the virus research laboratory.

## ORGANIZATION OF THE DEPARTMENT OF NATIONAL HEALTH AND WELFARE

The Act establishing the Department of Health in 1919 stated the duties, powers and functions of the Department: "extend to and include all matters relating to the promotion or preservation of the health, social security and social welfare of the people of Canada over which the Parliament of Canada has jurisdiction". By the terms of the British North America Act of 1867 and by tradition, direct responsibility for health services rests with the provincial and local governments. In addition to statutory responsibilities, the federal department assists the provinces in the forwarding of health programs. By the British North America Act, the federal government became responsible for maritime quarantine, marine hospitals, the census and collection of vital statistics. Hospitals, asylums and charitable institutions continued to be the responsibility of the provinces.

In 1944, the Department of National Health and Welfare Act was passed replacing the Department of Pensions and National Health. The Department is located in Ottawa in numerous buildings. New food and drug laboratories, a new laboratory of hygiene and a virus laboratory have recently been constructed in the west end of the city and plans are being made for the construction of a central administration building for the Department in the same area. The Department has steadily increased its activities during the past 15 years and at the present time employs more than 5,000 people in 230 establishments in Canada and overseas—only 1,200 are employed in Ottawa itself. There are field units in every province and throughout the Northwest Territories as well as in the British Isles and Continental Europe where much of Canada's immigration medical work is done.

The head of the Department is the Minister of National Health and Welfare. Reporting directly to the Minister are the two Deputy Ministers who are the permanent Civil Service heads of the Department. The Deputy Minister of National Health, Dr. G. D. W. Cameron, is responsible for the administration of the Health Branch; the Deputy Minister of Welfare, Dr. George F. Davidson, is responsible for the Welfare Branch. Jointly, they are responsible for the Administration Branch and for the Department's work in the field of civil defence.

## THE HEALTH BRANCH

The Health Branch of the Department includes three directorates—the Food and Drug Directorate, the Directorate of Indian and Northern Health Services, and the Health Services Directorate. A fourth section of the Health Branch—Medical Advisory Services—includes the Civil Aviation Medicine and Civil Service Health Divisions, and Quarantine, Immigration Medical and Sick Mariners' Services. A fifth section, the Division of Narcotic Control, completes the Health Branch.

### FOOD AND DRUG DIRECTORATE

This directorate administers Canada's Food and Drugs Act and the Proprietary or Patent Medicine Act. These acts are designed to control the safety, purity and quality as well as the labelling and advertising of all foods, drugs, cosmetics and therapeutic devices manufactured or sold in Canada. The directorate maintains a staff at administrative headquarters and at the Ottawa laboratories of some 165 people, as well as another 150 employees in five regional laboratories across Canada. These regional offices are concerned with the examination of import shipments and of domestic foods and drugs, inspection of food and drug plants, scrutiny of radio and TV advertising material and examination of labelling claims of food and drug products. Considerable research is carried out in setting up standards and methods of analysis for new products.

### INDIAN AND NORTHERN HEALTH SERVICES DIRECTORATE

A public health hospital and medical care program for the Indian and Eskimo population is maintained and also a program of public health education. The directorate acts for the Northwest Territories in the role of a provincial department of health. Indian and Northern Health Services, with a staff of over 1,900 persons, administers 17 departmental hospitals, 43 nursing stations and 75 health centers and clinics, many of which are in extremely remote areas of the country. There are approximately 158,500 Indians and about 10,000 Eskimos in Canada and, because of the vast areas over which they are scattered, the maintenance of health services for them is a difficult and costly operation.

### HEALTH SERVICES DIRECTORATE

The responsibilities of this directorate include the provision of technical and financial assistance to the provinces, certain statutory duties which are federal in character, co-ordination of extra-mural and intra-mural research activities,

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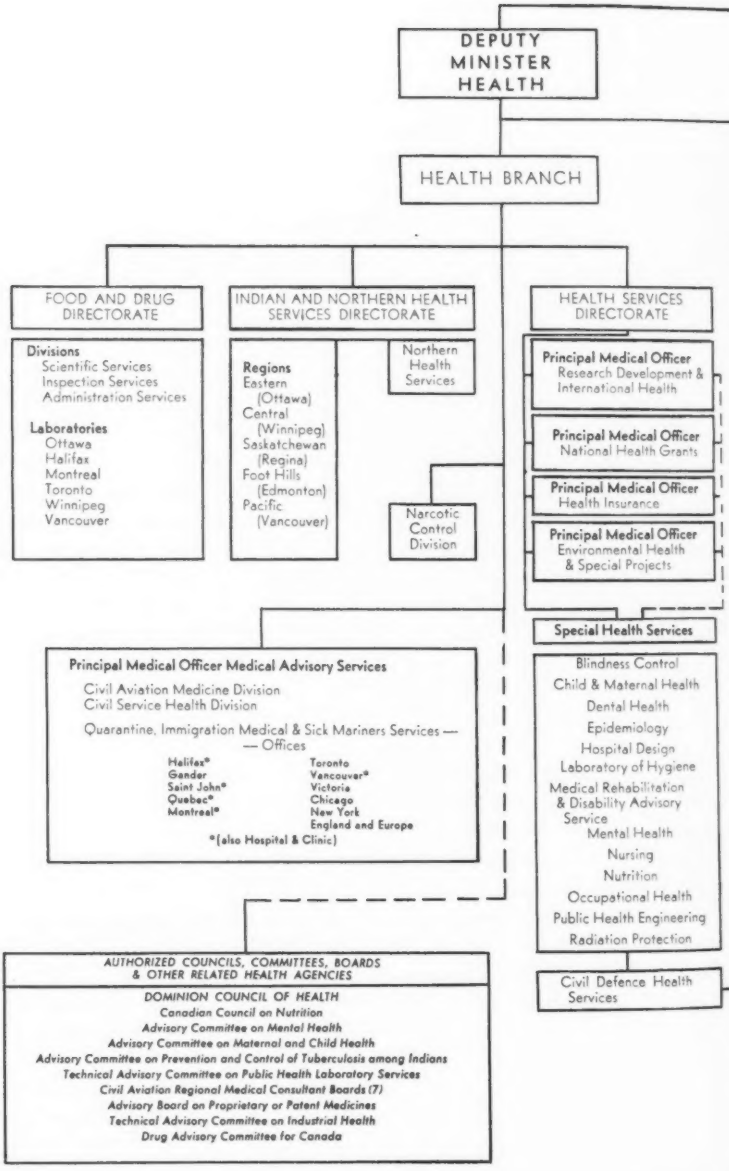
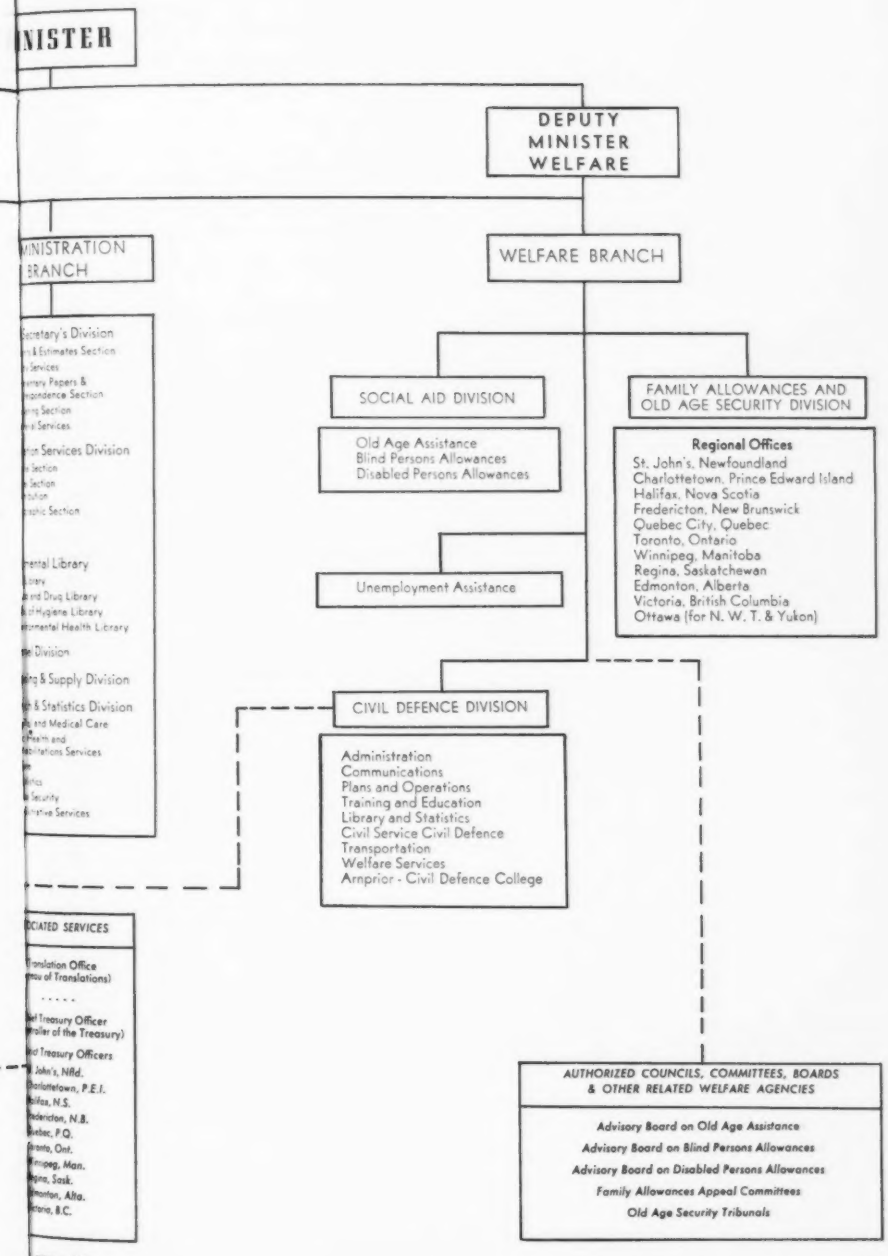


# HEALTH & WELFARE

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assistance and consultant services to other parts of the department and other departments of the federal government and obligations related to the international health field.

These duties are carried out, under the supervision of a director of health services, by four main sections, each of which is headed by a principal medical officer, and by a number of divisions providing special health services.

Sections under the supervision of the four principal medical officers are Research Development and International Health, National Health Grants, Health Insurance, Environmental Health and Special Projects. The principal medical officers also assist the director in the co-ordination of the work of the divisions concerned with special health services.

### Environmental Health and Special Projects

Because of his responsibilities with respect to problems of air pollution and water pollution, the principal medical officer maintains a close working relationship with the divisions of occupational health, public health engineering and radiological protection. He is the Canadian representative on such committees as the Scientific Committee of the United Nations on the Effects of Atomic Radiation and the International Commission on Radiological Protection. Because of his interest in atomic energy matters, he is also a member of the Reactor Safety Advisory Committee of the Atomic Energy Control Board, and is responsible for the departmental program concerned with the effects of radioactive fallout. In the latter program, the department receives advice and assistance from subcommittees on the genetic and somatic effects of radiation.

### Health Insurance

This section administers the Hospital Insurance and Diagnostic Services Act, which provides for the sharing of the costs of provincially operated hospital insurance programs in accordance with agreements between the federal and provincial governments. By January 1, 1959, seven provinces had programs in operation, and two others were making the necessary plans for the inauguration of similar programs.

### National Health Grants

Under this program, which was inaugurated in 1948, assistance has been given to the provinces in the development and extension of their health facilities through the following 12 grants: general public health, tuberculosis control, mental health, VD control, crippled children, professional training, cancer control, public health research, hospital construction, laboratory and radiological services, medical rehabilitation, child and maternal health. The grants which started at $30 million in 1948, increased to $48 million in 1958–59.

### Research Development and International Health

*Research Development.* The duties of the principal medical officer under this part of the program are to secure independent scientific appraisal of applications for research grants under the National Health Grants Program, to

maintain contact with recipients of research grants in respect to technical aspects of their research work; to maintain liaison with other federal agencies for the co-ordination of federal research programs, and with national and provincial voluntary agencies sponsoring medical research; to conduct studies on the overall support of medical research in Canada and to make recommendations on the emphasis and direction which the department's research activities should be given in order to achieve a balanced medical research program for the country as a whole.

*International Health.* Activities in this field arise out of Canada's responsibilities as a member of the World Health Organization, as a participant in the medical assistance program of the Colombo Plan, and from her membership in other international agencies.

SPECIAL HEALTH SERVICES (CONSULTANT AND LABORATORY)

In carrying out the overall responsibilities of the directorate, services are also provided through the following divisions: blindness control, child and maternal health, dental health, epidemiology, hospital design, laboratory of hygiene, medical rehabilitation and disability advisory service, mental health, nursing, nutrition, occupational health, public health engineering, and radiation protection.

These divisions provide special consultant and advisory services to the provinces, to other parts of the department and other departments of the federal government, and are responsible for specific public health research programs. They review and evaluate health grants projects in their particular fields and are responsible for the technical accuracy of the health education material produced by the department. They co-operate with professional organizations and voluntary agencies working in their fields.

*Blindness Control Division* reviews eye reports and issues blindness certificates to the provinces as a final stage in processing applications for blindness allowance under the Blind Persons' Act. Over 8,500 persons, representing three-quarters of the blind in Canada between 18 and 70, are on allowance. At age 70, the allowance is changed to Old Age Security Pension.

A treatment scheme devised by the division and designed to restore vision to suitable recipients of blindness allowance is administered jointly by the division and eight provinces.

Eleven glaucoma prevention of blindness clinics have been set up across Canada with provincial co-operation under the Health Grants program.

*Child and Maternal Health Division* makes available medical and nursing consultation services to provincial health departments and other health agencies for the assessment of present facilities and services and for planning new programs, and serves as a clearing house for information programs and services.

*Dental Health Division* participates in research related to the prevention of tooth decay, such as the Brantford Fluoridation Caries Study and studies on the topical use of fluoride compounds and provides consultant services to Indian and Northern Health Services and Civil Defence, in addition to its general consultant services.

*Epidemiology Division* studies the prevention and control of communicable and non-communicable diseases, provides technical information and carries out research, including statistical analyses. It acts in an advisory capacity as requested by provincial health departments in dealing with outbreaks of infectious diseases. It prepares and distributes statistical data on certain diseases.

*Hospital Design Division* is concerned with the planning of hospital construction to which hospitals built with the assistance of Hospital Construction Grants must conform. Drawings are submitted to this division for approval or amendment before a formal request for federal assistance is made. During the ten years following 1948, more than $116,437,000 was allocated toward the construction of accommodation for more than 77,053 patient beds, 10,012 bassinets, 15,493 nurses' beds and 330 interns' beds.

*Laboratory of Hygiene* serves as the national public health reference laboratory, conducting research in public health and clinical laboratory fields. It inspects and controls the manufacture of biological products such as sera, vaccines, toxoids and antibiotics and establishes standards for these products. These functions are carried out in six scientific subsections: bacteriology, virus, clinical, biochemical research, biologics control and zoonosis.

*Medical Rehabilitation and Disability Advisory Services* are concerned with the medical aspects of the Disabled Persons Act and the integration with this of a sound development in medical rehabilitation. This service provides guidance to medical review boards established to evaluate total and permanent disability and has prepared a "Disability Evaluation Manual" in which procedures are described, legal definitions are interpreted, types of acceptable medical evidence are explained and guide forms drawn up.

*Mental Health Division* advises on the disposition of the mental health grants, which increased from $4 million in 1948 to $7 million in 1958. It fills many requests for discussions on research design, employment policies, training of personnel, etc. It maintains a continuous evaluation of the requirements for mental health services in Canada and attempts to promote programs most likely to lead to improvement in treatment services for the mentally ill. It sponsors a monthly bulletin, "Canada's Mental Health" and a large program of production of mental health education materials, including films, filmstrips, pamphlets and posters.

*Nursing Consultant* interprets the nursing profession to the department and the department to the nursing profession. She provides assistance and advice to various divisions within the department on request, and to various other government departments. She maintains close liaison with the provincial departments of health on problems affecting the nursing profession and with the Canadian and provincial nursing associations. She arranges programs for post-graduate nurses from three universities each year, in order to acquaint them with the work of the departments.

*Nutrition Division* works to improve feeding of people in groups by carrying out kitchen experiments for hospital feeding, school lunches, etc., and research projects on such subjects as ration lists, vitaminized biscuits, etc. Its

clinical nutrition laboratory carries out a wide range of micro tests related to nutrition for use in surveys of nutritional status.

The nutrition division is actively engaged in continuing studies related to methods of assessing nutritional status, compilation of the Table of Food Values recommended for use in Canada, and for Canadian food and nutrition statistics, and the study of food habits and related sociological factors.

*Occupational Health Division* renders services which may be classified as clinical, laboratory, air pollution and education and information.

The clinical staff answers requests for information and assistance on occupational health problems, including aspects of toxic substances, occupational diseases, environmental hazards and conditions.

The nursing consultant assists provincial nursing consultants and is available for conferences, institutes and visits to industries.

The laboratory service conducts surveys and engages in field and laboratory studies.

The air pollution section gives advice on such problems as pollution of air from operations involving emission of toxic compounds, and is concerned with the establishment of standard techniques for methods of sampling, analysis and specifications for control of odours and gases.

*Public Health Engineering Division* administers regulations respecting water for drinking and culinary purposes on common carriers in interprovincial and international traffic. It also administers the Public Works Health Act and Regulations respecting sanitary conditions in construction camps on projects financed by the federal government.

Since 1925 it has carried out the terms of an international agreement regarding the joint certification (with the United States Public Health Service) of shellfish produced for export and the issuance of export certificates.

It also deals with problems of water supply, sewage disposal and sanitation on federal property, including national parks and areas in the far north.

*Radiation Protection Division* advises the Atomic Energy Control Board on all health aspects of the use of atomic energy and its by-products. It supervises the use of radioisotopes and approves applications for permission to use such material, provided they meet certain standards.

It operates a Film Monitoring Service for those working with radioisotopes and visits are made to laboratories where they are in use to conduct contamination surveys. About 7,000 people are enrolled in the Film Monitoring Service.

Plans are well under way for research into physical measurements and biological effects of radiation exposure.

## MEDICAL ADVISORY SERVICES

The Medical Advisory Services is the fourth major grouping of the Health Branch services which reports directly to the Deputy Minister of National Health through a principal medical officer. These services are responsible for the overall supervision of the civil aviation medicine division, the civil service health division and the quarantine, immigration medical and sick mariners service.

### Civil Aviation Medicine Division

This division acts as adviser to the federal Department of Transport, to the medical profession and to civil aviation organizations on all problems relating to the health, safety and comfort of civilian aircrew, ground crew and airline passengers.

The division is responsible for conducting and promoting education in aviation medicine for the Department of Transport approved medical examiners, regional medical officers and regional consultants; for representing Canada at international aviation medical conferences; for providing the flying clubs and training schools with information in the medical aspects of safety in flight; for maintaining contact with the aviation industry on the industrial medical aspects of flight.

### Civil Service Health Division

The health center or medical center affords a diagnostic and advisory service on an outdoor basis to some 35,000 federal government employees, including the dependents of all foreign service personnel. Treatment is restricted to emergency medical and surgical cases of minor conditions and is directed towards keeping the employee on the job. A nursing counsellor service is provided in health units in 26 government buildings and a basic advisory service is provided to all government departments in relation to improving working conditions. Certain medical examinations of a statutory nature or to assess employee suitability are provided to employees outside Ottawa by special arrangement.

### Quarantine, Immigration Medical and Sick Mariners Service

This division carries on a program which includes the administration of the Quarantine Act. This involves the inspection of incoming traffic to Canada by water, land, or air, with a view to preventing the entry of infectious diseases. The Leprosy Act is also the responsibility of this service.

*Immigration Medical* work of this service provides for the medical examination of immigrants overseas and in Canada and for medical examination and treatment of all persons who are subject to the authority of the Citizenship Branch of the Department of Citizenship and Immigration. There are approximately 60 medical officers stationed in the United Kingdom and on the continent of Europe at the larger centers, and other medical officers are detailed for duty as required with travelling immigration teams in Germany, Italy, Portugal, Malta and the Azores. In addition to Canadian medical officers, there are many scores of local medical men who are appointed to examine immigrants in countries where the flow of immigration to Canada is not sufficiently large to warrant the maintenance of officers there. These include Norway, Sweden, Finland, Malta, Portugal, Switzerland, and the various cities in India, Pakistan, and Hong Kong.

*Sick Mariners Service* is responsible for providing medical, surgical and other treatment as required to crews of vessels which pay tonnage dues under the Canada Shipping Act. For this purpose, a hospital is operated in Sydney, N.S., and clinics at Vancouver, Quebec, Victoria, Saint John, Halifax and Montreal.

## THE DIVISION OF NARCOTIC CONTROL

This division administers the Opium and Narcotic Drug Act. This includes the maintenance of adequate control over the legal distribution of narcotics to ensure that supplies are used only for medical and scientific needs, the suppression of the illicit traffic in drugs in co-operation with the Royal Canadian Mounted Police and other enforcement agencies, and co-operation with other countries which are members of the United Nations to ensure that there is international control over the movement and use of narcotic drugs.

Since Canada does not manufacture basic supplies of narcotics, all our needs must be imported. It is one of the responsibilities of the division to ensure that adequate material is on hand and available for distribution at all times. Medication having a narcotic content may not be imported or exported, except under a license issued by the division. Additionally, all firms which are entitled to distribute narcotics operate under a licensing system and are required to maintain and furnish records covering transactions involving this type of medication.

From the standpoint of international control, at regular intervals detailed information concerning existing narcotic conditions in the country is furnished to international supervisory bodies. This includes the establishment of estimates for the country's yearly requirements of drugs. Statistics also are submitted on a quarterly basis setting forth the amounts of narcotic drugs imported and exported.

## WELFARE BRANCH

The Welfare Branch is responsible for the administration of a number of statutes which comprise the social assistance program at the federal level in Canada. These statutes include the Family Allowances Act, the Old Age Security Act, the Old Age Assistance Act, the Blind Persons Allowances Act, the Disabled Persons Act and the Unemployment Assistance Act.

In 1957, the Family Allowances Act was revised to permit payments of $6 per month for each child from birth to 6 years of age. The payments for children from 10 to 13 years of age were raised to $8 per month. This means that there are now only two rates of payment, $6 monthly for children from birth to age 10, and $8 a month for children from 10 to age 16. In the last full fiscal year, there were 2,418,910 separate accounts under the Family Allowances Act and a total of almost $438,000,000 was paid out to parents and guardians of Canadian children.

Recent changes have been made in both the amounts and the administrative regulations of the Old Age Security Act. At the end of 1957–58, there were over 836,000 active accounts and a total of almost $380,000,000 had been paid out to Canadian pensioners. Old Age Security is paid to Canadian citizens over the age of 70.

Under the Old Age Assistance Act the federal government pays 75% of an amount not exceeding $55 a month to persons between the ages of 65 and 70 who are in need. The Act has been in effect since 1952 and the federal government made payments amounting to almost $129,000,000 to the end of March 1958.

Allowances under the Blind Persons Act have been paid since January 1952. Amended in 1957, the Act now permits payments up to $55 a month to blind pensioners. In 1957–58 the federal contribution under this Act was slightly over $3,500,000.

Under the Disabled Persons Act the federal government contributes 50% of a pension up to $55 a month for totally disabled persons. At the end of March 1958 almost 42,000 pensioners were in pay and the federal contribution under the Act amounted to over $11,000,000.

Under the terms of the Unemployment Assistance Act the federal government may enter into agreements with the provinces whereby it contributes 50% of the cost of unemployment assistance. The conditions under which assistance is provided are determined by the province or municipality and expenditures for both employable and unemployable persons may be included. Total federal expenditures for Unemployment Assistance at the end of the fiscal year 1957–58 were just over $8,200,000.

### Civil Defence

Related to both the Health and Welfare Branches of the Department are Civil Defence Services. These are designed in case of enemy attack or disaster to reduce loss of life, to afford medical and other assistance to the civilian population, to ensure that essential production will continue, to restore public utilities and services as quickly as possible and to mitigate the property damage that may be caused. The Civil Defence Services guide, direct and co-ordinate the activities carried on by the provinces to make sure that planning is sound, that key personnel and instructors are trained in the various specialized fields and that sufficient supplies of materials and equipment required exclusively for civil defence purposes, are made available to the provinces. Financial assistance is also available to the provinces and municipalities.

At Arnprior, Ontario, the Federal Civil Defence College is operated by this department for the training of key personnel in the many aspects of civil defence. Those attending courses are chosen by the provinces and after training at Arnprior return to their provinces to act as instructors. Courses are carried out for such people as fire-fighters, pharmacists, doctors, nurses, welfare workers, feeding experts, people concerned with the operation of harbours or with transportation problems, and so on.

## ADMINISTRATION BRANCH

The third branch of the department—the Administration Branch—is composed of the Departmental Secretary's Division, Information Services Division, Legal Division, Departmental Library, and the Research and Statistics Division. All these divisions serve the entire department both across Canada and overseas.

### Departmental Secretary's Division

This division is responsible for providing financial advisory service to the department and for much of the work involved in the long and complicated

procedures related to the preparation and approval of departmental estimates. Much of the material required for tabling in Parliament is prepared in this division, which is responsible as well for the management of the department's records and for providing correspondence, typing, transcribing, duplicating, addressograph, and other services.

### Information Services Division

The division carries out extensive programs in the fields of public information, health education, and public relations. It is responsible, in co-operation with departmental officials, provincial officers and others, for the production of a wide range of publications and pamphlets, for radio programs, for films, for displays, all dealing with health, welfare and civil defence subjects. Nearly all publications are distributed through provincial channels.

### Legal Division

General legal services are provided to the entire department in matters within departmental responsibility and concern. These services include the furnishing of legal advice and opinion, the preparation of contracts, agreements, and other legal documents, the interpretation of statutes and regulations, and advising on prosecutions under the Food and Drugs Act, the Opium and Narcotic Drug Act, the Family Allowances Act and the Old Age Security Act. The division is also responsible for providing advice in the drafting of legislation, the revision of regulations, and the preparation of submissions to the Governor in Council and the Treasury Board.

### Departmental Library

The Library is responsible for the selection, acquisition and organization of reference and technical books, serials, pamphlets and Government documents on all subjects related to the department's work for collections in Ottawa and field establishments.

### Personnel Division

This division serves the department in the areas of personnel management and organization.

### Purchasing and Supply Division

This division provides for materials, equipment, supplies, accommodation, printing and stationery, telephones and other public utility services. This includes contracting for and procuring scientific, technical, and medical equipment for hospitals, laboratories, health units, clinics, the Civil Defence College, quarantine and immigration stations.

### Research and Statistics Division

The division carries out a program of analysis and evaluation of basic information on health and welfare matters, with special reference to their social and economic aspects. It prepares reports and generally acts in an advisory capacity to senior officers of the department. It works in close co-

operation with other divisions and maintains liaison with many agencies in Canada and abroad engaged in work of social or economic interest to the department.

### Authorized Councils, Committees, and Boards

*Dominion Council of Health.* The Council was established by the act creating the department in 1919. It is composed of the provincial deputy ministers of health and representatives of agriculture, labour, rural and urban women's groups and a scientific adviser. The federal deputy minister of health presides at the sessions which are held twice a year to consider matters relating to the health of the people of Canada and to initiate recommendations and proposals to the minister of national health and welfare.

*Canadian Council on Nutrition* was formed in 1937 and antedates the formation of the nutrition division. Other special agencies include the Advisory Committee on Maternal and Child Health, the Advisory Committee on Prevention and Control of Tuberculosis among Indians, the Technical Advisory Committee on Public Health Laboratory Services, seven civil aviation regional medical consultant boards, the Advisory Board on Proprietary or Patent Medicines, the Technical Advisory Committee on Industrial Health, and the Drug Advisory Committee for Canada.

On the Welfare side, there are advisory boards on old age assistance, blind persons allowances and disabled persons allowances, family allowances appeal committees and old age security tribunals.

### Grants to Voluntary Organizations

An important form of assistance carried on by the department is the provision of financial grants to voluntary organizations. While such grants are comparatively small they recognize the great value of the work being carried out by agencies in the fields of health and welfare such as the Canadian Tuberculosis Association, Victorian Order of Nurses, the Canadian Red Cross Society, St. John Ambulance Association, Canadian Paraplegic Association, Canadian National Institute for the Blind, the Health League of Canada, Canadian Public Health Association, and others.

# Dustfall Measurements

A. M. FISHER, M.A., Ph.D.[1]

IN the measurement of pollution of urban atmosphere data concerning dustfall are usually collected. The procedure usually followed is to expose a basin or jar to the atmosphere for a period of one month. The contents of the jar are then examined for soluble and insoluble solids, tar, ammonia and other components which may be of interest. The values obtained from an examination of the contents of the basin—having an area which may be only a hundred square inches—are usually reported in terms of tons per square mile. Although this transposition from square inches to a square mile may be open to question, the fact remains that this is the customary way of reporting dustfall measurements. The method receives strong support, however, when it is realized that a value given in tons per square mile is one which is readily appreciated by the public and the public has a fundamental interest in atmospheric pollution —especially in dustfall.

Apart from interest in absolute values for any one area, measurements of dustfall are used to compare the extent of pollution at different times of the year, over an extended period, in various areas of a city, etc. Comparisons are also made between dustfall records for other cities. In this way, it may be possible to obtain an estimate of the value of control measures. It has been shown (1) that such comparisons can lead to greatly erroneous conclusions since the value which is obtained for dustfall depends to a considerable extent upon the type of vessel which is used as a settlement basin. The present paper records values obtained at one station with dustfall basins of several types. It is thought that the comparative data recorded here will be of assistance in making valid comparisons between dustfall values, if those values have been obtained with any of the basins used in this study. The paper also illustrates the importance of the selection of dustfall basin in any new studies to be undertaken.

## Equipment

The following dustfall basins have been used in this investigation:

A Porcelain basin 18″ diameter, shown in Figure 1, draining into an aluminum container.

B British standard (2) deposit gauge 12½″ diameter, shown in Figure 2, draining into an aluminum container.

C Detroit-International Joint Commission collecting bowl with an effective diameter of $11\frac{3}{16}$″ and having its container as an integral part, as shown in Figure 3.

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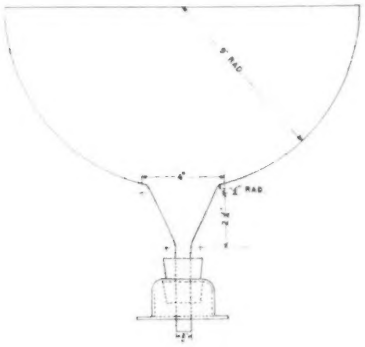

FIG. 1: Gauge A—Toronto type

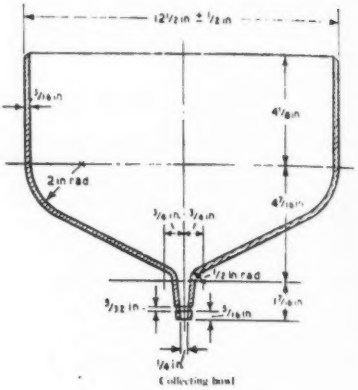


FIG. 2: Gauge B—British Standard

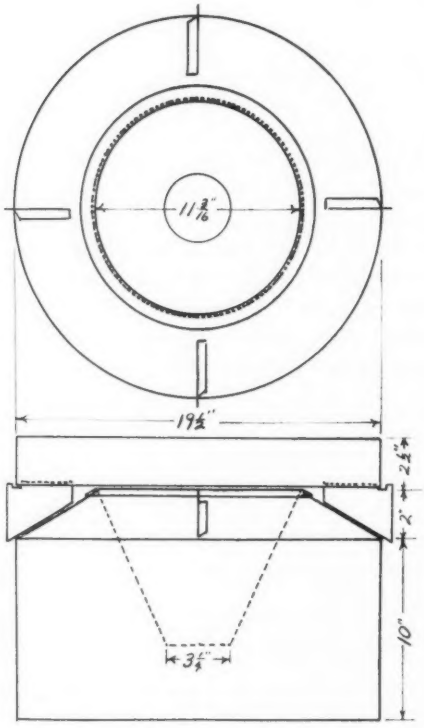


FIG. 3: Gauge C—Detroit—
International Joint Commission

D Glass jar battery 6″ diameter having vertical sides 11″ high, as recommended for study by a committee of the Air Pollution Control Association (3).

E A container adopted at a meeting convened by Dr. C. M. Jephcott, Director, Air Pollution Control Branch, Department of Health, Ontario, and consisting of a piece of black plastic pipe 6″ internal diameter, 18″ high, closed at the bottom with a tightly-fitting plastic base.

Each of these pieces of equipment was placed at an elevation of 3.8 feet above the roof of the School of Hygiene Building, University of Toronto, Queen's Park. The basins were, therefore, 55 feet above ground level. It is appreciated that, in some respects, this height above ground is higher than that generally used in recording dustfall. Nevertheless, there is no valid objection to this height for comparative study. All the equipment was placed in one location on the building within an area of about 30 square feet.

### Duplicate Estimations

With the object of checking the procedures used in this work, two basins of type A were exposed near each other for a period of several months. The values for dustfall (that is, soluble solids plus insoluble solids) are recorded as tons (2,000 pounds) per square mile in Table I.

TABLE I—Dustfall in Tons (2,000 pounds) per Square Mile per Month as Recorded by Identical Gauges at One Location

| | 1953 | | | | | | | | 1954 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gauge | Jan. | Feb. | Mar. | Apr. | June | July | Sept. | Oct. | July | Aug. | Sept. | Oct. |
| A—1 | 36.6 | 28.7 | 37.9 | 26.0 | 24.4 | 18.2 | 24.2 | 28.4 | 12.6 | 20.8 | 22.8 | 31.4 |
| A—2 | 38.2 | 30.3 | 37.2 | 25.1 | 25.0 | 18.4 | 23.1 | 28.6 | 14.6 | 20.9 | 22.0 | 30.0 |

It will be noted that the values obtained by use of these two gauges of the same type differ by an amount not greater than 2.0 tons per square mile per month.

### Various Types of Gauges

Records of dustfall obtained using the types of gauges already described as A, B, C and D are shown in Table II.

### Discussion

From Table I it appears that use of gauges of type A (Toronto—Fig. 1) permits making duplicate measurements which do not appear to be different from each other. If one considers for each month the ratio of the value obtained by gauge A-1 to that obtained by gauge A-2 it is found that the value is 0.992 with 95% confidence limits of 0.963 to 1.021. Thus there is no suggestion that the results with gauge A-1 are different from those with gauge A-2. It is, therefore, reasonable to compare results obtained in the present study with

those (4) of 1933–5 and to compare results in various areas in Metropolitan Toronto since the gauge of Fig. 1 has been used in all these measurements.

Table II shows the dustfall in tons per square mile recorded at Station 1 when gauges of various types were used. The values differ widely. It would be of interest to determine which gauge permits a measurement of the true value–if, indeed, a true value per square mile can be determined by measurements made over an area of approximately one square foot. It does not necessarily follow that the *highest* value should be considered the *true* value.

TABLE II—Dustfall in Tons (2,000 pounds) per Square Mile as Recorded by Various Gauges at One Location

| Gauge | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 1956 | | | | | | |
| A—Toronto | — | 24.2 | 36.2 | 24.8 | 40.2 | 19.3 | 21.6 | 26.3 | 24.6 | 20.9 | 24.4 | 29.0 |
| B—British | — | 23.4 | 37.0 | 23.8 | 38.8 | 19.8 | 20.0 | 27.4 | 22.6 | 16.0 | 24.4 | 23.4 |
| C—Detroit | — | 33.0 | 65.4 | 44.9 | 64.2 | 37.2 | 43.3 | 49.2 | 45.1 | 48.0 | 43.4 | 51.0 |
| D—APCA | — | — | — | 31.3 | 56.5 | 40.7 | 26.4 | 46.5 | 25.5 | 29.5 | — | 37.3 |
| | | | | | | 1957 | | | | | | |
| A—Toronto | 21.0 | 24.0 | 28.0 | 29.8 | 24.4 | 24.6 | 19.7 | 18.2 | 19.0 | — | 20.2 | 30.0 |
| B—British | 13.4 | 21.4 | 20.9 | 33.1 | 24.0 | 15.7 | 20.3 | 19.6 | 20.6 | 20.7 | 25.5 | 28.8 |
| C—Detroit | 26.5 | 31.3 | 69.5 | 50.3 | 53.7 | 43.3 | 30.1 | 34.9 | 42.6 | 32.8 | 58.1 | 62.3 |
| D—APCA | 22.0 | — | 53.0 | 48.0 | 38.7 | 44.3 | 29.4 | 35.8 | 39.0 | 45.2 | — | 42.1 |
| | | | | | | 1958 | | | | | | |
| A—Toronto | 21.0 | 26.1 | 17.8 | 23.6 | 23.2 | | | | | | | |
| B—British | 27.4 | 20.4 | 12.9 | 24.5 | 27.7 | | | | | | | |
| C—Detroit | 43.7 | 48.4 | 37.2 | 58.4 | 53.8 | | | | | | | |
| D—APCA | 39.0 | — | — | — | — | | | | | | | |

It would also be of interest to find an explanation for differences between the various gauges. However, the immediate objective is to determine a factor which will permit a reasonable comparison between results obtained in one area with a gauge of a specified type with those obtained in another area with a gauge of a different type. The use of such a factor has been proposed by Sesenbough and Hemeon (5). Consider, therefore, the ratio of the values for total dustfall obtained each month by gauge A to those obtained by gauges B, C, and D in the corresponding months. The following calculations can then be made:

| Gauges | Mean Ratio | 95% Confidence Limits |
|---|---|---|
| A: B | 1.079 | 0.997 to 1.161 |
| A: C | 0.537 | 0.494 to 0.580 |
| A: D | 0.667 | 0.592 to 0.742 |

From the above summary it appears that gauges A and B yield values for total dustfall which are almost equal, the value with gauge A (Toronto), yielding on the average a value only 8% greater than that obtained with gauge B (British Standard). It is equally clear that values obtained with gauge C (Detroit-IJC) and those obtained with gauge D (APCA) are different from each other and from those obtained with either of gauges A or B. It is suggested that, for purposes of comparison with values obtained by

gauge A, the values obtained with the other gauges should first be multiplied by the appropriate value noted above.

Gauge E is one which has only recently been adopted for study. Nevertheless, observations over a short period show that one should not make a direct comparison between values obtained with this gauge and those obtained with other gauges. Preliminary results are shown in Table III.

TABLE III—DUSTFALL IN TONS (2,000 POUNDS) PER SQUARE MILE AS RECORDED BY TWO TYPES OF GAUGES IN ONE LOCATION

| Gauge | 1958 Oct. | 1958 Nov. | 1958 Dec. | 1959 Jan. | 1959 Feb. | 1959 Mar. |
|---|---|---|---|---|---|---|
| A | 21.2 | 25.6 | 18.4 | 22.8 | 23.1 | 28.2 |
| E | 24.8 | 32.4 | 25.5 | 24.7 | 31.8 | 37.8 |
| A:E | 0.855 | 0.792 | 0.722 | 0.923 | 0.727 | 0.746 |

SUMMARY

Dustfall measurements made at various locations should not be compared directly if the measurements have been made with gauges of different types. If the types are known, the use of a factor may permit a valid comparison. Factors for use with four common gauges are proposed.

ACKNOWLEDGEMENTS

The author wishes to record the helpful assistance of Mr. J. Horwood, Mrs. H. Rahlenbeck and Mr. A. H. Lacey. Partial financial assistance was extended by the City of Toronto and later by the Municipality of Metropolitan Toronto.

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# Recent Trends in the Incidence of and Mortality from Leukaemia in Saskatchewan

G. SOTIROFF,[1] Dr.rer.pol.; F.R.Econ.S

RECENT data obtained from the Saskatchewan Hospital Services Plan, and data derived from the Vital Statistics Reports of the Dominion Bureau of Statistics, afford an interesting study of the incidence of and mortality from leukaemia.

As an index of incidence may be taken the number of leukaemia cases discharged from Saskatchewan hospitals. The number of such cases in each one of the years 1949–1956 is shown in Table I. Figures include leukaemia and aleukaemia (*code numbers 204.0–204.4 of the International Statistical Classification of Diseases, Injuries and Causes of Death*), and refer to cases covered by the Saskatchewan Hospital Services Plan. In 1956, the Plan covered 94.4% of the population of Saskatchewan.

TABLE I—LEUKAEMIA AND ALEUKAEMIA "INCIDENCE", PATIENT-DAYS, AND NEW CASES, SASKATCHEWAN, 1949–56

| | Discharged cases | | | Patient days | | | | | New Cases* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Number | Rate per 100,000 SHSP covered population | Index | Number | Rate per 100,000 SHSP covered population | Index | Per discharged case | Index | Number | Rate per 100,000 SHSP covered population | Index |
| 1949 | 165 | 21.5 | 100.0 | 4748 | 619.8 | 100.0 | 28.8 | 100.0 | 47 | 6.1 | 100.0 |
| 1950 | 140 | 18.2 | 84.6 | 2508 | 327.0 | 52.7 | 17.9 | 62.1 | 39 | 5.1 | 83.6 |
| 1951 | 150 | 19.2 | 89.3 | 3218 | 413.1 | 66.6 | 21.4 | 74.3 | 48 | 6.2 | 101.6 |
| 1952 | 172 | 21.9 | 101.9 | 3239 | 412.1 | 66.5 | 18.8 | 65.3 | 36 | 4.6 | 75.4 |
| 1953 | 206 | 25.6 | 119.1 | 3699 | 460.1 | 74.2 | 18.0 | 62.5 | 54 | 6.7 | 109.8 |
| 1954 | 241 | 29.7 | 138.1 | 4824 | 595.5 | 96.1 | 20.0 | 69.4 | 60 | 7.4 | 121.3 |
| 1955 | 251 | 30.5 | 141.9 | 4683 | 590.9 | 95.3 | 18.7 | 64.9 | 59 | 7.2 | 118.0 |
| 1956 | 219 | 26.3 | 122.3 | 4371 | 526.0 | 84.9 | 20.0 | 69.4 | 60† | 7.2† | 118.0† |

*Diagnosed in Regina and Saskatoon Cancer Clinics. †Preliminary.
Sources: (a) Saskatchewan Hospital Services Plan. (b) Saskatchewan Cancer Commission.

It will be seen that discharged cases declined from 1949 to 1950, after which they increased steadily until 1955, while the 1956 figure again showed a decline. However, the trend revealed in this way may have been affected by repeated admissions of the same patients. In order to see if this was the case, the rate of discharged cases may be usefully compared with that of newly diagnosed cases. This comparison shows that, prior to 1952, the trend of new cases diagnosed every year diverged somewhat from the trend of discharged cases. From 1952 on, the similarity of the two trends is unmistakable.

As to the index of patient-days per 100,000 covered population, it showed a sharp drop from 1949 to 1950, followed by a rise in 1951. After remaining practically the same in 1952, the index rose again in 1953 and 1954. It declined

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slightly in 1955, and still more in 1956. This trend strongly suggests that the apparent drop in 1950, was due to a change in policy on the part of the Saskatchewan Hospital Services Plan.

The number of patient-days per discharged case showed a sharp drop in 1950, an increase in 1951, and minor fluctuations in subsequent years.

In order to gain better insight into the relevant mortality trends, separate mortality rates were computed for leukaemia and aleukaemia on the one hand and for all other types of cancer on the other (Table II).

TABLE II—LEUKAEMIA AND ALEUKAEMIA, AND ALL OTHER CANCER MORTALITY, SASKATCHEWAN AND CANADA, 1945–56

| | Mortality rates per 100,000 population | | | | Index of mortality rates (1949 = 100) | | | |
|---|---|---|---|---|---|---|---|---|
| | Leukaemia* | | Other Cancer | | Leukaemia* | | Other Cancer | |
| Year | Saskatchewan | Canada | Saskatchewan | Canada | Saskatchewan | Canada | Saskatchewan | Canada |
| 1945 | 3.6 | 3.4 | 98.9 | 120.9 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1946 | 4.6 | 3.8 | 88.5 | 121.4 | 127.8 | 111.8 | 89.5 | 100.4 |
| 1947 | 4.8 | 4.0 | 108.5 | 125.8 | 133.3 | 117.6 | 109.7 | 104.2 |
| 1948 | 5.0 | 4.0 | 103.9 | 128.2 | 138.9 | 117.6 | 105.0 | 106.0 |
| 1949 | 5.2 | 4.5 | 109.5 | 126.0 | 144.4 | 132.3 | 110.7 | 104.2 |
| 1950 | 5.3 | 4.6 | 112.0 | 122.8 | 147.2 | 135.3 | 113.2 | 101.6 |
| 1951 | 5.3 | 4.5 | 106.0 | 122.7 | 147.2 | 132.3 | 107.2 | 101.5 |
| 1952 | 5.0 | 4.6 | 109.0 | 124.0 | 138.9 | 135.3 | 110.2 | 102.6 |
| 1953 | 6.5 | 5.2 | 113.2 | 123.6 | 180.5 | 152.9 | 114.5 | 102.2 |
| 1954 | 6.3 | 5.0 | 107.9 | 123.8 | 175.0 | 147.1 | 109.1 | 102.4 |
| 1955 | 7.2 | 5.3 | 113.0 | 123.9 | 200.0 | 155.9 | 114.3 | 102.5 |
| 1956 | 6.6 | 5.2 | 115.7 | 124.6 | 183.3 | 152.9 | 117.0 | 103.1 |

*Including aleukaemia.
Source: Dominion Bureau of Statistics, Vital Statistics Report.

In Saskatchewan mortality from leukaemia and aleukaemia doubled between 1945 and 1955, and declined slightly in 1956. There was also an increase in mortality from other types of cancer, but the maximum increase in any one year over 1945 did not exceed 17.0%.

The indices for Canada as a whole show a similar relation, although the upward trend is not as sharp as the one observed in Saskatchewan. In 1956, mortality from leukaemia and aleukaemia in Canada was 52.9% higher than in 1945. The corresponding increase in mortality due to other types of cancer was 3.1%. The maximum increase over the 1945 mortality rate, for cancer other than leukaemia and aleukaemia, was in 1948 when the index was 106.0.

## CONCLUSIONS

The most interesting observation is the doubling of the leukaemia mortality rate in Saskatchewan from 1945 to 1955. An upward mortality trend was also observed in Canada as a whole but the increase was considerably smaller.

Both in Saskatchewan and in Canada as a whole, mortality from all other types of cancer shows a relatively small increase over 1945, not exceeding 17.5% in any one year. As a matter of fact, the mortality index for cancer other than leukaemia and aleukaemia for Canada as a whole has not stood higher than 3.1 points over the 1945 level in any one year since 1950.

The incidence of leukaemia and aleukaemia in Saskatchewan showed a marked increase in the period 1951–1955. The number of days in hospital per leukaemia patient showed relatively minor variations.

# Perinatal Mortality—The Problem and Its Definition[1]

ESTHER J. ROBERTSON,[2] Reg. N., B.S.

PERINATAL mortality is a major problem in the field of maternal and child health and should be thought of as a public health as well as an obstetric and paediatric problem. Nurses as well as doctors can make a significant contribution to the solution of the problem. Many factors have an influence. These include socio-economic conditions, i.e. income, cultural and social backgrounds, housing, illegitimacy; medical and nursing knowledge and skills; hospital and public health services; public knowledge. Prenatal care, care during delivery and for the first few hours or days of a baby's life have a distinct bearing on the problem. Nurses in both the hospital and public health fields need to be aware of the major factors which might influence perinatal mortality and the conditions or causes which contribute to perinatal deaths. *Prematurity*: As prematurity is associated with a high proportion of neonatal deaths, nursing services directed towards the problem of prematurity might have the most influence on reduction of the perinatal mortality rates.

Public health nursing services can make their contribution to the prevention of prematurity through maternal and child health services, services for potential parents, nutrition teaching and through prenatal programs. There is a particular challenge for public health nurses in the area of prenatal education and nursing supervision. The development of prenatal programs in the form of prenatal classes has been very remarkable in recent years. There is no doubt that these will reap broad benefits for maternal and newborn health as more and more mothers have a better understanding of their health needs during pregnancy. Group teaching, however, can never take the place of individual nursing supervision and instruction which is adapted to meet the special medical or social needs of mothers in their own homes. It would be unrealistic to suggest that a public health nurse could visit every expectant mother in her home. With staff situations as they are today public health organizations have to plan many of their programs on a priority basis. When doctors and public health nurses work out special referral systems, mothers with potential problems can be visited in their homes by a public health nurse between the mothers' visits to the doctor's office. Priority may be given to the following expectant mothers: those expecting twins, triplets, or more; those with early signs of toxaemia or other complications and very young and

[1]Presented at the forty-sixth annual meeting, Canadian Public Health Association, Vancouver, B.C. May 19–22, 1958.

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older primipara, i.e. those under twenty and over forty. Priority also may be given to those who have had six pregnancies or more, those who have had previous obstetric difficulties and to unmarried mothers.

If expectant mothers in these groups received public health nursing service the nurse could help them obtain early, continued medical supervision, adequate nutrition, adequate rest and relaxation and freedom from worry.

In many communities not all doctors realize the contribution to maternal health which a public health nurse can make through her visits to expectant mothers. Many doctors think of public health nursing service as set apart from the service they are providing, not as being closely linked with medical service. This may be partly the fault of public health nurses who have failed to interpret nursing supervision adequately to these doctors.

When doctors understand that public health nursing supervision complements rather than supplements medical supervision, they will be more willing to refer prenatal mothers needing special help. A public health nurse visiting a mother in her home helps to interpret the doctor's orders. She reiterates the doctor's instructions, observes the mother's general condition and the home situation and she reports to the doctor any new problems which might have developed since the mother's last visit to the doctor's office. Doctors and nurses working together can contribute substantially to the prevention of perinatal mortality by providing more complete supervision for mothers during the prenatal period.

*The Intranatal Period*: The nursing contribution to the prevention of problems in the intranatal period, i.e. while the mother is in labour, includes skilful observation of the mother during labour and immediate reporting of foetal distress. To make their full contribution, nurses-in-training require careful preparation to assume this responsibility. Every hospital providing a maternity and newborn service needs to have well prepared graduate nurses as supervisors and clinical instructors in the labour and case room unit. Graduate nurses who are serving in these areas need special preparation beyond their basic preparation in the field of maternity nursing as well as in teaching and supervision. In our present-day set up for care at confinement, doctors depend a great deal on nursing judgment and skill for the efficient management of a mother during labour. With the increase in hospital deliveries, doctors are not always present when the mother is in the first or even the early part of the second stage of labour. Not all hospitals have residents or internes, therefore, nurses are called upon to assume heavy responsibilities for the mother during labour. Their accurate observations and management of problems in the interval between when the doctor is called and when he arrives have an influence on the problem of perinatal mortality. Knowing when to call the doctor requires expert judgment which only experienced, well prepared nurses can be expected to have.

*The Natal Period*: During the actual birth of the baby, the doctor and the nurse work as a team. Nursing responsibilities include skilful assistance in establishing the baby's respiration and careful thought to the maintenance of the baby's body temperature. The immediate care in the delivery room and the

care later provided in the nursery is planned to take into consideration the baby's difficulty in establishing respiration and maintaining body temperature; his difficulty in feeding as well as his susceptibility to infection. The skill of the nurse in providing care for premature or problem newborns influences the baby's chances for survival. Here again, if professional skills are to effect a reduction in perinatal mortality, we need nurses with special preparation in charge of nurseries. To date, Canadian facilities for training graduate nurses to meet the particular needs of these fragile babies are rather limited.

Planning for a problem newborn or a premature baby to go home should begin before the mother leaves the hospital. Many hospitals provide a teaching service which includes a demonstration of bathing the baby. If the baby has been left in the hospital, some hospitals arrange for the mother to return to the teaching center for a demonstration bath before the baby is sent home. Still others ask the mother to come to the hospital the morning of the day the baby is to be discharged. Arrangements are made for her to care for and to feed her baby with nursing supervision before she takes the baby home. Teaching the mother to care for her baby is important. Unfortunately, we know that many problem newborn or premature babies are sent home to mothers totally unprepared to care for them or to home situations which would not be conducive to the best health of the baby. These are the ones which return with infection. This risk could be reduced if a problem newborn and premature follow-up program became part of the services offered in every community. Here again, it may be necessary to work out a system of priorities. A public health nurse could visit early in the postnatal period the following babies: babies whose birth weight was below four pounds (especially first babies as primiparous mothers need more help); babies with other handicaps and babies in unsatisfactory homes, i.e. where there is overcrowding, inadequate housing, low income. Included also would be babies in large families (where there might be found other children as sources of infection, busy overworked mothers, inability to pay for private medical supervision or inability to use free clinic or conference services unless help was available in planning so appointments could be kept).

Nurses can make a contribution to the statistical aspects of the problem of perinatal mortality by assisting parents with birth registration forms. A working knowledge of the forms and information required would assist with the provision of more accurate data.

Nurses who think of perinatal mortality as a nursing as well as an obstetric and paediatric problem will be in a position to make a significant contribution to the solution of the problem. Public health nurses and hospital nurses working together will be able to take into consideration the socio-economic conditions, community facilities and family education as these affect the problem.

Skilled medical and nursing care available in the prenatal, natal and immediate neonatal period is very important. Important too, are follow-up services with health teaching which will enable parents to meet the health needs of premature babies or babies with neonatal problems.

# *Canadian Journal of Public Health*




## MARKING THE JUBILEE YEAR OF THE ASSOCIATION

WHAT would be a suitable way to mark the Jubilee of the Association and the Journal? What new service could the Association render that might remind us of the years of service of those who laid the foundations of public health in Canada? An answer came in the suggestion of publication by the Association of a brief history of each of the provincial departments of health and the federal department and an outline of the present services. Such a volume should be issued at intervals as an authoritative, up-to-date review of Canadian public health services. The deputy ministers of health unanimously approved of the project. The publication of a series of eleven articles was commenced last fall and will be completed in October. The senior author of each article is the responsible deputy minister. The splendid co-operation which has been given by the deputy ministers and their departments is evidence of the important place in public health which the Association occupies in Canada.

Each article provides a historical background, a map of the province and a brief description, an outline of the present health services and a chart of the departmental organization. The historical highlights are of particular value as a convenient, permanent record of the major contributions in the development of the health program.

In 1940 the Association issued in collected form a series of articles on the history of the development of public health in the provinces and in the federal government. Although the issue was exhausted many years ago requests are still received for copies of this publication. The commemorative volume of the Jubilee will not only serve to mark the fiftieth year of the Association but will be of distinct service to students of public health in all countries.

The Jubilee of the Canadian Public Health Association and its Journal is a significant event in the history of public health in Canada. The volume "Public Health Services in Canada" will record the story of the past fifty years and will outline the present organization of the federal and provincial health departments. This publication will, indeed, be a most appropriate commemoration of this important milestone in the history of the Canadian Public Health Association.

# *Program*

## TENTH ANNUAL MEETING

OF THE

# Ontario Public Health Association

KING EDWARD SHERATON HOTEL, TORONTO

SEPTEMBER 28, 29, 30, 1959

**MONDAY, SEPTEMBER 28, 8.30 a.m.**

8.30 a.m. Registration, Mezzanine Foyer.

**MONDAY, 9.30 a.m.**

## MINISTER'S CONFERENCE FOR MEDICAL OFFICERS OF HEALTH

Crystal Ballroom

(General Membership Welcome)

Presiding: W. G. Brown, M.D., Deputy Minister of Health for Ontario.

9.30 a.m. **Address of Welcome.**

HON. MATTHEW B. DYMOND, M.D., Minister of Health for Ontario.

9.45 a.m. **Presentations by Staff of the Ontario Department of Health and Discussion Period.**

11.00 a.m. **Public Health and our Aging Population**

The Lengthening Life Span

A. H. SELLERS, M.D., Director, Division of Medical Statistics, Ontario Department of Health.

Employment of Older Workers

L. F. KOYL, M.D., Director, Assessment Unit, Sunnybrook Hospital.

**MONDAY, 12.30 p.m.**

## LUNCHEON

Sheraton Room

12.30 p.m. Presiding: A. R. J. BOYD, M.D., President, Ontario Public Health Association.
Address: HON. MATTHEW B. DYMOND, M.D., Minister of Health for Ontario.

**MONDAY, 2.00 p.m.**

## MINISTER'S CONFERENCE FOR MEDICAL OFFICERS OF HEALTH

Crystal Ballroom

(General Membership Welcome)

Presiding: W. G. BROWN, M.D., Deputy Minister of Health for Ontario.

2.00 p.m. **Public Health and our Aging Population**

Nutrition and Older People

E. W. McHENRY, Ph.D., Professor, Public Health Nutrition, School of Hygiene, Toronto.

The Older Person and the Community

MRS. JEAN GOOD, Executive Director, Ontario Society on Aging.

Mental Health Aspects of the Aging Process

A. B. STOKES, B.M., Professor and Head of Department of Psychiatry, University of Toronto.

**MONDAY, 3.30 p.m.**

## HEALTH OFFICERS' SECTION

Crystal Ballroom

Presiding: G. L. ANDERSON, M.D., Medical Officer of Health, Lambton Health Unit, Sarnia.

3.30 p.m. **Section Business Meeting.**

**MONDAY, 3.30 p.m.**

## PUBLIC HEALTH NURSING SECTION

Canadian Court

Presiding: MISS H. E. FLETCHER, R.N., Supervisor, Public Health Nursing, Department of Public Health, Toronto.

3.30 p.m. **Section Business Meeting.**

**MONDAY, 3.30 p.m.**

## ENVIRONMENTAL HYGIENE SECTION

Hunting Room

Presiding: D. E. PLUMMER, C.S.I.(C), Chief Sanitary Inspector, Peel County Health Unit, Brampton.

3.30 p.m. **Section Business Meeting.**

**MONDAY, 3.30 p.m.**

## DENTAL PUBLIC HEALTH SECTION

Room 216

Presiding: M. E. JARRETT, D.D.S., Director of Dental Services, Wellington County Health Unit, Fergus.

3.30 p.m. **Section Business Meeting.**

**MONDAY, 3.30 p.m.**

## VETERINARY PUBLIC HEALTH SECTION

Colonial Room

Presiding: D. R. MacDONALD, D.V.M., Veterinarian, Department of Health, Windsor.

3.30 p.m. **Section Business Meeting.**

**MONDAY, 3.30 p.m.**

## PUBLIC HEALTH EDUCATION SECTION

Room 215

Presiding: MISS M. C. CAHOON, B.Ed., Associate in Public Health Education, School of Hygiene, Toronto.

3.30 p.m. **Section Business Meeting.**

**MONDAY, 3.30 p.m.**

## PLUMBING INSPECTORS' SECTION

Elizabeth Room

Presiding: VERNON BAKER, C.S.I.(C), Chief Plumbing Inspector, London.

3.30 p.m. **Section Business Meeting.**

**MONDAY, 5.30 p.m.**

## NOMINATIONS AND RESOLUTIONS COMMITTEE ONTARIO PUBLIC HEALTH ASSOCIATION

President's Suite

**MONDAY, 7.30 p.m.**

## BOARD OF DIRECTORS
## ONTARIO PUBLIC HEALTH ASSOCIATION

President's Suite

**TUESDAY, SEPTEMBER 29, 8.30 a.m.**

8.30 a.m. Registration, Mezzanine Foyer.

**TUESDAY, 9.00 a.m.**

## FIRST GENERAL SESSION

Crystal Ballroom

9.00 a.m. Theme: **Public Health in our Changing Environment—General Considerations.**
Chairman: MILTON H. BROWN, M.D., Associate Director, School of Hygiene, Toronto.
Participants:

R. J. WILSON, M.D., Assistant Director, Connaught Medical Research Laboratories, Toronto.

MISS ISABEL BLACK, R.N., Director, Division of Public Health Nursing, Ontario Department of Health.

GORDON NIKIFORUK, D.D.S., Chairman, Division of Dental Research, University of Toronto.

W. W. ARMISTEAD, D.V.M., Dean, College of Veterinary Medicine, Michigan State University, East Lansing.

E. R. HARRIS, M.D., Medical Officer of Health, Timiskaming Health Unit, Kirkland Lake.

**TUESDAY, 11.30 a.m.**

## ANNUAL MEETING OF THE ONTARIO PUBLIC HEALTH ASSOCIATION

Crystal Ballroom

**TUESDAY, 2.00 p.m.**

## JOINT SECTION MEETING "A"

(Health Officers', Public Health Nursing and Health Education Sections)
Crystal Ballroom

Presiding: G. L. ANDERSON, M.D., Director, Lambton Health Unit, Sarnia.
Theme: **New Horizons in the Prevention and Treatment of Mental Disorders.**

2.00 p.m. **Ontario's Mental Health Program.**

B. H. McNEEL, M.D., Chief, Division of Mental Health, Ontario Department of Health.

Discussion Period.

2.45 p.m. Panel Discussion: **Mental Health Aspects of a Public Health Program.**
Moderator:

H. W. HENDERSON, M.D., Director, Community Mental Health, Division of Mental Health, Ontario Department of Health.

Participants:

J. H. BAILLIE, M.D., Regional Medical Director, Bell Telephone Company of Canada, Toronto.

E. J. ROSEN, M.D., Director, Children's O.P.D., Toronto Psychiatric Hospital.

C. G. STOGDILL, M.D., Director, Child Adjustment Services, Board of Education, Toronto.

MISS BERNICE SEEDS, R.N., Director, Toronto Branch, Victorian Order of Nurses.

R. A. KENNEDY, M.D., Medical Officer of Health, Ottawa.

C. A. CLELAND, M.D., Superintendent, Ontario Hospital, St. Thomas.

**TUESDAY, 2.00 p.m.**

## DENTAL PUBLIC HEALTH SECTION

2.00 p.m. **Cleft Palate Rehabilitation and Operative Procedures for Handicapped Children.**
Visit to Dental Division, Hospital for Sick Children. (Meet in Rotunda of Hospital, 1.45 p.m.).

**TUESDAY, 2.00 p.m.**

## VETERINARY PUBLIC HEALTH SECTION

Room 216

Presiding: D. R. MacDONALD, D.V.M., Veterinarian, Department of Health, Windsor.

2.00 p.m. **Veterinary Public Health.**
W. W. ARMISTEAD, D.V.M., Dean, College of Veterinary Medicine, Michigan State University, East Lansing.

2.30 p.m. **Mycotic Infections Common to Man and Animals.**
J. B. FISCHER, M.S.A., Mycologist, Division of Laboratories, Ontario Department of Health.

3.00 p.m. **Rabies Vaccination.**
R. J. McCLENAGHAN, B.V.Sc., Director, Contagious Diseases Control, Canada Department of Agriculture.

**TUESDAY, 2.00 p.m.**

## JOINT SECTION MEETING "B"

(Environmental Hygiene and Plumbing Inspectors' Sections)

Mayfair Room

Presiding: D. E. PLUMMER, C.S.I.(C), Chief Sanitary Inspector, Peel County Health Unit, Brampton.

2.00 p.m. **Plumbing and Public Health.**
A. F. BULL, M.D., Medical Officer of Health, Halton County Health Unit, Milton.

3.00 p.m. **Group Discussion: The Provincial Plumbing Code.**
Leader: L. A. McCREESH, C.S.I.(C)., Senior Sanitary Inspector, Halton County Health Unit, Milton.

3.20 p.m. **Panel Discussion: The Growth and Development of the Sanitary Inspector in Ontario.**
Chairman: J. A. JACKSON, C.S.I.(C)., Ontario County Health Unit, Pickering.
Participants:
J. D. ANDERSON, C.S.I.(C)., Department of Public Health, Toronto.
D. M. DECAISE, C.S.I.(C)., Department of Health, Hamilton.
D. A. FEENY, C.S.I.(C)., Department of Health, Scarborough.
A. S. HESTER, C.S.I.(C)., Brant County Health Unit, Brantford.
W. H. ROBINSON, C.S.I.(C)., East York-Leaside Health Unit, Toronto.

**TUESDAY, 6.30 p.m.**

## PRESIDENT'S RECEPTION

Reception Room

**TUESDAY, 7.30 p.m.**

## ANNUAL DINNER AND PRESENTATION OF HONOURS

Crystal Ballroom

Presiding: A. R. J. BOYD, M.D., President, Ontario Public Health Association.
**Address: The Future of Ontario.**
E. G. PLEVA, Ph.D., Professor, Department of Geography, University of Western Ontario, London.

**WEDNESDAY, SEPTEMBER 30, 9.30 a.m.**

## JOINT SECTION MEETING "C"

Crystal Ballroom

(Health Officers' and Public Health Nursing Sections)

Chairman: MISS EOLA SCOTT, R.N., Director of Public Health Nursing, Department of Public Health, London.

9.30 a.m. **Panel Discussion: Auxiliary Public Health Workers.**

Participants:

B. RUSSELL, M.B., Assistant Medical Officer of Health, Department of Health, Township of North York.

MISS JEAN LEASK, R.N., Assistant Director, Public Health Nursing, Department of Public Health, Toronto.

**WEDNESDAY, 9.30 a.m.**

## DENTAL PUBLIC HEALTH SECTION

9.30 a.m. **Visit to the new building of the Faculty of Dentistry, University of Toronto.** (Meet in Rotunda of building, 9.30 a.m.)

**WEDNESDAY, 9.30 a.m.**

## JOINT SECTION MEETING "D"

(Environmental Hygiene and Veterinary Public Health Sections)

Hunting Room

Presiding: D. E. PLUMMER, C.S.I.(C)., Chief Sanitary Inspector, Peel County Health Unit, Brampton

and

D. R. MacDONALD, D.V.M., Veterinarian, Department of Health, Windsor.

9.30 a.m. **Food Wrapping and Packaging.**

T. A. DAY, P.Eng., Sales Technical Manager, Films Department, DuPont of Canada Limited, Montreal.

10.15 a.m. **Food Preservation**

J. L. TRUSCOTT, Ph.D., Chief Research Scientist, Horticultural Experimental Station, Ontario Department of Agriculture.

11.00 a.m. **Departmental Policy re Milk and Dairy Inspection.**

M. W. WALKINSHAW, P.Eng., Director, Division of Environmental Sanitation, Ontario Department of Health.

**WEDNESDAY, 9.30 a.m.**

## HEALTH EDUCATION SECTION

Mayfair Room

Presiding: K. L. HAWKINS, Director, Health Information, Ontario Department of Health.

9.30 a.m. **The Health Education Program of the Ontario Tuberculosis Association.**

W. F. J. ANDERSON, M.P.H., Health Education Consultant, Ontario Tuberculosis Association, Toronto.

11.00 a.m. **Psychological Aspects of Health Education.**

J. W. LOVETT DOUST, M.B., Assistant Professor of Psychiatry, University of Toronto.

**WEDNESDAY, 2.00 p.m.**

## SECOND GENERAL SESSION

Crystal Ballroom

2.00 p.m. Theme: **Public Health in our Changing Environment—Certain Specific Aspects.**

Chairman: MISS HELEN FASKEN, R.N., Director of Nursing Services, Wellington County Health Unit, Fergus.

Participants:

A. E. BERRY, Ph.D., General Manager, Ontario Water Resources Commission.

R. W. I. URQUHART, M.D., Chairman, Ontario Hospital Services Commission.

E. G. FALUDI, P.Eng., President, Town Planning Consultants Limited, Toronto.

# News Notes

## Federal

Dr. G. D. W. Cameron, Deputy Minister (Health) of the Department of National Health and Welfare, was made a Fellow of the Royal College of Physicians, in London, on May 28. Dr. Cameron, who was in Geneva heading the Canadian delegation to the Twelfth World Health Assembly, flew to London for the ceremony.

Mr. H. Gordon Hughes, Chief of Hospital Design, Department of National Health and Welfare, attended the International Hospital Federation Congress in Edinburgh, Scotland, in June, and, thereafter, visited selected geriatric and chronic care institutions in Ireland, Denmark, Sweden, Holland and France, before returning to Ottawa in August.

At the Industrial Waste Conference, sponsored by the Ontario Water Resources Commission, June 14–17, at Honey Harbour, Dr. M. Katz, Consultant, Atmospheric Pollution Services, Occupational Health Division, Department of National Health and Welfare, gave a paper on "Federal Activities in Atmospheric Pollution".

Dr. L. B. Pett, chief of the nutrition division and Dr. J. Benoit Bundock of the National Health Grants Administration of the Department of National Health and Welfare, represented the Department at the Conference on Aging and Chronic Illness held at Regina on June 24–26.

Dr. Gordon E. Wride, Principal Medical Officer of the National Health Grants Administration, gave an address: "Observations on the Canadian Sickness Survey" to the combined meeting of the British Medical Association and the Canadian Medical Association, held at Edinburgh, Scotland, July 18–24.

## British Columbia

Introduction by the Provincial Health Branch of a new type of summer uniform for the public health nurse has had a most popular reception. Light blue in colour, the one-piece dress is made of dacron and cotton cord, which is crease-resistant, requires minimum care, and can be laundered by the "drip-dry" method. Embroidered insignia of the Health Branch are sewn on the matching hat, and on the right sleeve.

The 26th annual meeting of the Western Branch, American Public Health Association, was held in San Francisco June 2–5. Among the 600 registrants were six from British Columbia, including the Deputy and the Assistant Provincial Health Officers, Dr. J. A. Taylor and Dr. G. R. F. Elliot. Among the many interesting items on the agenda, exceptional from a Canadian point of view, was the presentation of the John J. Sippy Memorial Award, which this year was granted to Dr. A. John Nelson for his outstanding contribution to western public health through his studies in epidemiology. Dr. Nelson is director of medical services for the B.C. Electric Company Ltd. in Vancouver and also associate professor of the Department of Preventive Medicine at the University of British Columbia. The presentation ceremony marked the first time that a Canadian has been chosen for this award.

On May 20 the health services available to the people of the Alberni Valley on Vancouver Island's west coast were augmented by the opening at Port Alberni of a new community health center which also serves the neighbouring city of Alberni and surrounding area.

## Saskatchewan

Delegates from the village, town and rural municipal councils in the newly formed Melfort-Tisdale Health Region chose Tisdale as the regional health center at the first meeting of the Regional Health Council held recently. The regional office will be housed in a community center to be built in Tisdale. At the same meeting the District Health Councils elected their representatives to the Regional Board.

Dr. Elizabeth C. Nelson, recently with the Nottinghamshire County Public Health Department, England, has taken up her duties as assistant medical health officer in the Yorkton Health Region.

*Nursing Services Division*

*Appointments*: Miss W. B. Bennett and Miss N. M. Maguire to Regina Rural Health Region; Miss A. J. Minty to North Battleford H.R.; Miss M. A. Jennings to Moose Jaw H.R.; Miss M. L. Gray to Yorkton H.R.; Mrs. W. H. Morin to Weyburn H.R.; Miss B. Rykorski to Swift Current H.R.; Miss A. McColl to Weyburn H.R. *Transfer*: Miss J. G. MacKay has been transferred from the Yorkton H.R. to the Melfort-Tisdale as Regional Nursing Supervisor. Miss M. Floyd has been transferred from Lac La Ronge to Imperial. *Resignations*: Miss A. Hedlin, Saskatoon; Mrs. V. Looman, Swift Current; Mrs. A. M. Rowbotham, Uranium City.

The Department of Public Health has moved into its new quarters, the modern Provincial Health and Welfare Building situated on government property near the legislative buildings. The five-storey concrete and steel building will also house the Department of Social Welfare.

Dr. D. J. Hoskings has resumed his duties as medical health officer of the Prince Albert Health Region. Dr. A. G. Lowden has been appointed medical health officer of the Melfort-Tisdale Health Region with headquarters at Tisdale.

Saskatchewan's first conference on the aged and long-term illness was held June 24–26 in Regina. Called by the provincial government, it was attended by a large number of official and voluntary agencies by invitation. Some of the questions discussed were: Is too much emphasis being placed on the use of institutions for the care of the aged and long-term ill? How can organized home care programs, visiting nurse service programs and other community efforts be developed as alternatives to institutional care? What factors contribute to the deterioration of the physical and mental abilities of the aged? What kinds of health care services are needed? How can these be organized and financed? How can we use more effectively existing resources?

**Manitoba**

Under the auspices of the Manitoba Department of Health and Public Welfare, the Red Cross Society, and with the co-operation of the Department of National Defence, a swimming pool operators' course was held in June. The mushroom growth of commercial swimming pools in the province, (there are now approximately 50), has necessitated a new approach to swimming pool control, and an increased need for adequate water safety education.

A 1956 graduate of Glasgow University, Dr. Wm. K. Allan joined the staff as a medical director on July 1, and will be stationed at Virden.

Dr. W. French, medical director at the Red River Health Unit and Dr. C. L. Isitt from the Neepawa Unit, will attend the University of Toronto this fall, to take their Diplomas in Public Health.

Grant McLeod, Director of Food Control, attended the second annual conference of the Canadian Institute of Food Technology in Toronto, during June.

**School of Hygiene, University of Toronto**

The appointment of Dr. John R. Brown as professor and head of the Department of Physiological Hygiene in the School of Hygiene has been announced by Dr. C. T. Bissell, University of Toronto president.

Dr. Brown will be responsible for developing the University of Toronto's program of postgraduate teaching for industrial and public health physicians.

Two physicians Dr. A. S. Arneil of Halifax, N. S. and Dr. D. J. Hosking of Prince Albert, Sask. tied for first place in the recent spring examinations held at the School of Hygiene and were jointly awarded the Donald T. Fraser Memorial Medal.

**New Brunswick**

Gilbert Delong and Patrick Blanchard have returned to the Sanitary Engineering Division of the New Brunswick Department of Health and Social Services following completion of their studies in sanitary engineering. Mr. Delong received his qualifications from the University of Toronto and Mr. Blanchard, from the University of Michigan.

**Nova Scotia**

Congratulations are extended to Dr. J. S. Robertson, Deputy Minister of Health, on becoming the new President of the Canadian Public Health Association for 1959–60.

The following is a list of nurses who recently completed the certificate course in public health nursing at Dalhousie University and have joined our staff: Mrs. Ella J. Rhindress, R.N., Chester; Mrs. Laura Whitman, R.N., St. Margaret's Bay Road; Misses Margaret Johnstone, R.N., Tatamagouche; Barbara Morris, R.N., Shubenacadie; Elnora Jackson, R.N., Bedford; Audrey Sheppard, R.N., St. Peters; Marilyn Anderson, R.N., Truro; Isabel Aikens, R.N., Sherbrooke; Marion Grandy, Cape Breton South.

Miss Edna Walsh has returned to the staff as Nursing Consultant in the Child and Maternal Health Division, having received her degree at Ottawa University during the past year.

Dr. A. S. Arneil who joined the City Department of Health, Halifax, in 1957 has returned from the University of Toronto where he obtained his Diploma in Public Health. Dr. Arneil and one other student were jointly awarded the Donald T. Fraser Memorial Medal for the outstanding student in the D.P.H. class.

Dr. A. R. Morton, City Commissioner of Health, is very happy to report the City Health Department has moved to the Halifax Health Center, which was formerly the Infectious Disease Hospital. It was closed as an Infectious Hospital in January 1959. In this center, they now have a tuberculosis diagnostic and a tuberculosis control center, as well as the City Department of Health.